

County Borough



of Blackburn.

ANNUAL REPORT

UPON THE

Health of Blackburn

For the Year 1915,

BY

J. COOTE HIBBERT, M.D. (Lond.), D.P.H.,

MEDICAL OFFICER OF HEALTH, MEDICAL SUPERINTENDENT
OF THE INFECTIOUS DISEASES HOSPITALS, CHIEF
EXECUTIVE TUBERCULOSIS OFFICER AND SCHOOL MEDICAL
OFFICER.

BLACKBURN:

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Corporation of Blackburn.

MEMBERS OF THE HEALTH COMMITTEE.

THE MAYOR (*Alderman Alfred Nuttall*).

ALDERMEN :

GARSDEN (*Chairman*).

WATSON.

FIELDING.

SHORROCK.

RAMSAY.

COUNCILLORS :

STEPHENSON.

HEATLEY.

JOHNSON.

WILD.

BOLTON.

POLLARD.

JENKINS.

LEIGHTON.

KEIGHLEY.

GREEVES (*Vice-Chairman*)

HIGHAM.

BATES.

HAMER.

WAREING.

CHARNLEY.

BROWNLEE.

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Statistical Summary for 1915.



Area of Borough	7,418 acres.
Population at Census, 1911	133,052
Estimated total Population 1915	134,716
Estimated Civil* Population 1915	127,443
Birth-Rate per 1,000 living, calculated on total Population for 1914	18.2
Death-Rate per 1,000 living, calculated on the civil population for 1915	16.1
Infant Mortality per 1,000 Births	145.6
Total Occupied Houses at 1911 Census	30,648
Plans of New Dwelling-houses passed during 1915	54
Rateable Value	£578,927

* Not including members of the armed Forces.

Staff of the Health Department.

Medical Officer of Health, School Medical Officer and Chief Executive Tuberculosis Officer.

J. COOTE HIBBERT, M.D. (Lond.), D.P.H.

Assistant Medical Officer of Health and Tuberculosis Officer.

A. J. EWING, M.A., M.B., Ch.B., D.P.H. (On Military Service).

School Medical Inspector and Assistant to Medical Officer of Health.

W. A. B. YOUNG, M.D. (Vict.), D.P.H. (Acting Tuberculosis Officer).

Veterinary Inspector and Chief Meat Inspector.

E. J. BURNDRED, M.R.C.V.S., D.V.H. (On Military Service).

Assistant Meat Inspector.

*W. H. GOODMAN.

Chief Sanitary Inspector.

*JAMES GRAHAM.

Special Inspector for Food and Drugs, &c.

*O. H. WILLIAMS.

Special Inspector for Factories and Workshops.

*H. KENYON.

Special Inspector for Drainage Work.

*A. LEES.

District Inspectors.

*J. W. MARGINSON.

*W. WALNE.

*W. E. GREENWOOD.

*ERNEST SEFTON.

Lady Health Visitors.

*Miss ST. STEPHENS. *Miss LOWE. *Miss LANGLEY. *Miss HENDERSON

Lady Inspectors of Midwives.

Miss ST. STEPHENS. Miss LOWE.

School Nurses.

*Miss BARTON. *Miss EVANS.

Chief Clerk.

THOMAS FOWLER.

Clerks.

H. PEMBERTON. T. PICKERING. J. HARGREAVES. W. ALTY.

Disinfectors.

J. W. JOHNSON. E. HODGSON. E. SHUTTLEWORTH.

*Holders of the Royal Sanitary Institute Certificates.

PUBLIC HEALTH OFFICE,
BLACKBURN,

May, 1916.

*To the Chairman and Members of the Health Committee
of the County Borough of Blackburn.*

MR. CHAIRMAN AND GENTLEMEN.

I have the honour to submit to you, in accordance with the regulations of the Local Government Board, my third Annual Report on the Health and Sanitary Conditions of the Borough, viz., that for the year ending December 31st, 1915.

The Report contains the Vital and Mortality Statistics, the measures adopted for the prevention of disease, and the work carried out by the Public Health Department generally.

Owing to the absence on military service of Dr. Ewing, Resident Medical Officer at the Infectious Diseases Hospital and Tuberculosis Officer, Dr. Young in addition to carrying out his other duties has acted as Tuberculosis Officer, and I have resided temporarily at the Infectious Diseases Hospital.

In the absence of Mr. Burndred, who is also on military service, the duties of Veterinary Inspector have been carried out by Mr. Holroyd, Junr., Veterinary Surgeon, Blackburn, and Mr. Goodman, Meat Inspector, has taken sole charge of the Public Abattoir.

On account of the difficulty in estimating the population (see pages 7 & 8), the accuracy of the mortality and other rates for the year is considerably diminished.

I have again to thank you for the kindly encouragement and support you have given to me in the carrying out of my duties.

I am,

Mr. Chairman and Gentlemen,

Your obedient Servant,

J. COOTE HIBBERT.

REPORT

OF THE

Medical Officer of Health

FOR 1915.

Blackburn is situated chiefly in the valley of the Blakewater, and to a much smaller extent in the valley of the Darwen.

The following are the heights above sea-level in various parts of the town :—

Town Hall	377 feet.
Revidge	715 „
Witton	318 „
Intack	483 „
Infirmery	402 „
Station	360 „
Fever Hospital	560 „

The rivers join on the western boundary of the Borough. On the north side of the Blakewater the land rises after the first few hundred yards rapidly from a height of about 300 feet to a height of 700 feet. To the south and west of the River Darwen there is also a fairly rapid rise from a height of 300 feet to 600 feet. The land between the two rivers has at first no great inclination, but towards the south-east it rises rapidly to a height of 650 feet. On the north side the gradients are as high in one or two instances as 1 in 7, and 1 in 10 or 12 are not uncommon. On the south side the steepest slope is 1 in 10. The fall of the valley of the

Blakewater is 86 feet in $2\frac{1}{4}$ miles, or 1 in 138. With few exceptions the falls in the town may be considered good. The deep strata underlying the town are principally the Lower Coal Measures or Gannister Beds. There is a narrow strip of Alluvium in the valley of the Darwen, and Millstone Grit (rock and shale) comes to the surface on the northern side of the Borough over a considerable area, and to a very small extent on the southern side. The Gannister Beds underlie nearly the whole of the town proper, and those parts which have Millstone Grit for their deep strata are chiefly agricultural land. With one or two small exceptions the deep strata are covered with drift beds. Throughout the greater part of the Borough the drift beds are principally composed of clay. There is, however, a considerable piece of land in the centre of the town covered with a good depth of pure sand. I cannot map it out correctly, but it includes the land on which the Town Hall, the Market House, the Parish Church, and the Railway Station are built. It extends northwards as far as Regent Street and Richmond Terrace. To the west it extends as a narrow elongated strip as far as Witton Stocks.

The sand varies considerably in its purity in different localities. In the neighbourhood of Church Street, Mincing Lane, Weir Street, Clayton Street, and King Street, it is of a clean reddish colour, and reaches, in some instances, to a depth of 15 to 20 feet, or possibly more. In the neighbourhood of Galligreaves Street and between Galligreaves Street and Whalley Banks, the sand was originally overlaid with a varying thickness of clay, but this was mostly removed before the land was built upon. To the south of Bank Top and Redlam the subsoil is composed mostly of a mixture of sand, gravel, and clay, whilst to the north of Bank Top and Redlam, as far as the River Blakewater, the subsoil is much purer sand. Over the remainder of the town the drift beds are mostly clay, or clay and gravel.

Millstone Grit comes to the surface along Revidge Road, and to some extent on both sides of the road, but principally

to the south. The deep strata are of interest chiefly from the water which is derived from them. The superficial strata or drift beds which form the subsoil are of great importance. Upon its character the dryness of the locality depends to a great extent, and frequently the dryness of the houses built upon it. It has also a very distinct bearing upon all diseases which are due to soil pollution, and also upon those diseases which are due to damp and cold.

Section I.

VITAL STATISTICS.

POPULATION.

The population of the County Borough of Blackburn, taken at the Census of 1911, was 133,052, of which 61,788 were males and 71,264 females: the population at the 1901 Census was 129,216.

Assuming that the population has continued to increase since 1911 at the same average rate as during the intercensal period 1901-1911, the population for the middle of 1915 is estimated to be 134,716.

As part of the population has been called up for military service, it has been necessary to estimate a civil population, and the following is an extract from the Memorandum issued by the Registrar General dealing with the method of framing this estimate and the reasons for its adoption.

“The war has made it impossible to adhere to the methods of estimation of local and national populations hitherto in use. Men of military age have been largely drafted to military training centres or sent abroad with the Army, and the remainder of the male adult population, as well as, to a lesser extent, the female population, has migrated on an unprecedented scale into areas other than those in which it was enumerated at the last Census.

“Under these circumstances estimates of local populations based on the Census returns were clearly inadmissible, and it became necessary to search for a substitute. Fortunately this was ready to hand in the shape of the National Register, which referred to a date only six weeks removed from that for which estimates were required, viz., the middle of the year 1915. No doubt this does not form a perfect

record, as it is known that a number of persons escaped registration. From investigations, however, which have been made in another connection it appears that the defects in the Register taken as a whole are not on such a scale as to affect seriously the estimates of population based upon it. By the method described below it was possible to derive from these returns estimates of the civil population only of each administrative area on August 15th. No attempt has been made to increase these by allowance for members of the fighting forces because, apart altogether from the difficulty of ascertaining the average military population of each district during the year, experience has shown that under present circumstances only civilian deaths can be tabulated for local areas. If military deaths were to be included they would have either to be debited to the area in which they occurred—a course which would render the death-rates of districts containing large military hospitals meaningless—or to the area of residence. An attempt made to pursue the latter course has had to be abandoned owing to the military authorities having been unable to furnish to the registrars the necessary information. It has been found necessary, therefore, to limit the tabulation of deaths by local areas to deaths of civilians, and under these circumstances the civilian population is obviously the proper one to use for the calculation of the death-rates.

“The question of the population to be used for the calculation of the birth rates has also required consideration. The births registered are not only those of the children of civilians, and the estimates of civil population therefore form an unsuitable basis for the calculation of birth-rates. It is impossible to frame any estimate that would give reliable birth-rates, and it is suggested, therefore, that the birth-rates for 1915 be based upon the existing estimates of total population for 1914. These will sometimes be seriously in error owing to extensive migration having occurred.”

The estimated civil population for the Borough is
127,443.

Table I.

YEAR.	Population at Census.	BIRTHS.	DEATHS.	Natural Increase in 10 year periods, also expressed as percentage of population.	Excess of Immigration over Emigration in 10 year periods, also expressed as a percentage of population.	Total Increase in 10 year periods, also expressed as a percentage of the population.
1841	36,629		955			
1842			945			
1843			1220			
1844			1143			
1845			1124			
1846			1488			
1847			1445			
1848			1214			
1849			1125			
1850			1315			
1851	46,536	2035	1264			
1852		2000	1697			
1853		2130	1758			
1854		2241	1320			
1855		2181	1781	6859	9731	16590
1856		2324	1330	14.7 %	20.9 %	35.6 %
1857		2372	1824			
1858		2277	1847			
1859		2479	1547			
1860		2675	1487			
1861	63,126	2773	1774			
1862		2754	1815			
1863		2568	1440			
1864		2730	1746			
1865		2737	1881	9211	4002	13213
1866		2775	2146	14.5 %	6.3 %	20.9 %
1867		2915	1867			
1868		3155	1961			
1869		3007	2337			
1870		3082	2318			
1871	76,339	3166	2033			
1872		3463	2050			
1873		3227	2462			
1874		3305	2432			
1875		3412	2200			
1876		3425	2435	10820	16855	27675*
1877		3518	2134	14.1 %	less	less
1878		3456	2742		12056 =	12056 =
1879		3418	2174		4799 or	15619 or
1880		3386	2294		6.2 %	20.4 %

* The population of the added portions of Witton, Livesey, Lower Darwen and Little Harwood are here deducted.

Table I—Continued.

YEAR.	Population at Census.	BIRTHS.	DEATHS.	Natural Increase in 10 year periods, also expressed as percentage of population.	Excess of Immigration over Emigration in 10 year periods, also expressed as a percentage of population.	Total Increase in 10 year periods, also expressed as a percentage of the population.
1881	104,014	3919	2431			
1882		3918	2665			
1883		4305	2660			
1884		4132	2663			
1885		4000	2452			
1886		4004	2863	13186	2864	16050
1887		4164	2974	12.6 %	2.7 %	15.4%
1888		4111	2865			
1889		4150	3077			
1890		4015	2882			
1891	120,064	4085	3116			
1892		3883	2551			
1893		3822	2793			
1894		3621	2173			
1895		3899	3084	10853	-3291	7562
1896		3552	2269	9.04 %	-2.7%	6.3%
1897		3629	2529			
1898		3662	2439			
1899		3643	2607			
1900		3438	2820			
1901	129,216	3386	2495			
1902		3357	2247			
1903		3304	2069			
1904		3100	2274			
1905		3193	2183	10514	6666	3848
1906		3418	2193	8.13%	5.15%	2.98%
1907		3348	2293			
1908		3415	2157			
1909		3139	2234			
1910		2948	1949			
1911	133,052	2857	2149			
1912		2741	1928			
1913		2915	2119			
1914		2805	2006			
1915		2452	2078*			

Between 1871 and 1881 the following additions were made to the Borough. In July, 1877: Livesey (part of) 4449; Witton (part of) 4180; Little Harwood (part of) 33. In July, 1879, Lower Darwen (part of) 2712; Little Harwood (part of) 682.

In November, 1901, parts of Witton and Livesey were added to the Borough, and the Registrar General has added these figures to those obtained at the 1901 Census.

* Includes only deaths among the civil population.

TABLE II.

Age Periods in Years.	Population estimated to the middle of 1915.	
	M	F
Under 5	6275	6060
5 — 15	11321	11333
15 — 25	11195	13521
25 — 35	11255	13552
35 — 45	8842	10425
45 — 55	7123	8535
55 — 65	4277	5092
65 — 75	1920	2816
75 and upwards	456	718
Total.....	62664	72052

These populations have been estimated without making any allowance for persons who have joined His Majesty's Forces. The estimated male populations for the age-periods 15-25, 25-35 and 35-45 are therefore specially unreliable.

MARRIAGES.

The number of marriages solemnised within the County Borough of Blackburn during 1915 was 1,250, as compared with 1,179 during 1914.

Of these, 640 took place in the Established Churches, 608 in the Nonconformist places of worship and at the Register Office, and 2 at the Jewish Synagogue.

The rate of persons married per 1,000 of the total population was 18.5.

The Marriage Rates for the previous five years were as follow :—

1910	.....	17.4
1911	.....	18.4
1912	.....	18.1
1913	.....	17.6
1914	.....	17.5

BIRTHS.

The number of births registered during the year in Blackburn was 2,456, of which 1,203 were males and 1,253 were females.

After correction according to instructions from the Registrar General, viz., that 4 of these births were to be allotted to other districts, the net births for the year were 2,452, which is equal to a birth-rate of 18.2 per 1,000 living (calculated on the population for 1914).

The birth-rates per 1,000 living during 1915 for England and Wales were as follows :—

England and Wales	.....	21.9
96 Great Towns (including London)	...	22.8
148 Smaller Towns	.....	21.6
England and Wales (less the 244 towns)		20.7
London	.....	22.6

TABLE III.

Notification of Births under the Notification
of Births Act.

Month	Total Births Notified	By Medical Men	By Midwives	By Parents	By Others	Males	Females	Sex not stated
January ...	252	61	160	28	3	118	133	1
February ...	214	38	154	22	...	101	111	2
March ...	235	36	172	24	3	116	119	...
April ...	230	48	163	18	1	112	116	2
May ...	234	55	163	16	...	122	111	1
June ...	203	30	149	23	1	100	103	...
July ...	215	44	138	31	2	107	105	3
August ...	202	42	139	21	...	102	99	1
September ...	155	32	107	16	...	77	77	1
October ...	184	38	133	13	...	89	95	...
November ...	151	34	100	17	...	69	81	1
December ...	186	40	134	12	...	87	97	2
TOTAL ...	2461	498	1712	241	10	1200	1247	14

ILLEGITIMATE BIRTHS.

Of the 2,452 births, 92 (or 3.7 per cent.) were illegitimate.

The percentages for previous years were as follow :—

1910	4.3 per cent.
1911	4.4 „ „
1912	5.0 „ „
1913	4.3 „ „
1914	4.5 „ „

Of the 92 illegitimate births, 55 were males and 37 females.

6 of these births occurred in the Union Workhouse, and 1 in the Royal Infirmary.

As in previous years, inquiries have been made respecting these illegitimate births, and 85 cases were investigated.

In 63 instances the mothers were engaged in the cotton industry, in 9 as servants, and 13 in other work away from home.

A Doctor attended the birth in 23 cases, a Doctor and Midwife in 15, a Midwife in 47.

TABLE IV.
Illegitimate Children.

Ward.	No. of Births.	Total number of deaths	Deaths under 1 year of age.
St. Stephen's	7	3	2
Trinity.....	9	4	2
St. Michael's.....	5	...	...
St. John's	6	4	3
St. Silas'.....	2	1	1
St. Paul's	11	1	1
St. Peter's	7	7	6
St. Mary's	5	5	2
St. Matthew's	8	3	3
St. Thomas'	9	4	3
Park.....	10	2	2
St. Luke's	5	3	3
St. Mark's	3	...	...
St. Andrew's	5	1	1
Borough	92	38	29

The mortality rate for illegitimate infants (number of deaths under one year of age per 1,000 births) was 315.2, as compared with 138.9 for legitimate infants.

STILLBORN CHILDREN.

The following are the numbers of Stillborn Children brought to the Cemetery during the year 1915, and reported to me by the Cemetery Registrar :—

Jan.	Feb.	Mar.	Apl.	May	June
12	17	19	7	8	10
July	Aug.	Sept.	Oct.	Nov.	Dec.
7	10	11	12	6	16
Total, 135.					

The figures include miscarriages.

The number of Stillbirths notified by Doctors and Midwives during the year in connection with the Notification of Births Act, was 124 (67 males, 57 females ; 4 illegitimate).

Visits were paid to the homes in 100 cases, and particulars obtained in 97.

A Doctor attended the confinement in 27 cases ; a Doctor and Midwife in 38 ; a Midwife in 32.

The stage of pregnancy was the 9th month in 55 cases, the 8th in 16, the 7th in 21, and the 6th in 5.

The presentation was vertex in 44 cases, feet in 7, breech in 9, transverse in 4, shoulder in 1, arm in 2. In 27 cases information of the presentation could not be obtained. In 3 cases there was placenta prævia.

The mothers were employed in the cotton industry or other work away from home in 46 cases ; they were engaged in home duties in 51.

In 3 cases the mothers were at work on the day of confinement, and in 5 cases within a week of confinement.

TABLE V.

Notification of Stillbirths received under the
Notification of Births Act.

Month			Total Stillbirths Notified	By Medi- cal Men	By Midwives	By Parents	Males	Females	Sex not stated
January	...	...	12	4	8	...	8	4	...
February	...	...	13	5	8	...	4	9	...
March	...	...	15	4	11	...	6	7	2
April	...	...	9	3	6	...	5	4	...
May...	...	...	12	4	8	...	5	7	...
June ..	...	...	7	2	5	...	4	3	...
July ...	...	...	7	2	5	...	5	2	...
August	...	...	11	5	6	...	4	7	...
September	...	...	6	5	1	...	4	2	...
October	...	...	10	5	5	...	5	5	...
November	...	...	5	3	2	...	3	2	...
December	...	...	17	11	6	...	12	5	...
Totals			124	53	71	...	65	57	2

TABLE VI.

Notification of Stillbirths during the last 5 years.

(Notification of Births Act).

Ward.	1911	1912	1913	1914	1915
St. Stephen's	17	8	14	9	16
Trinity	8	13	17	12	8
St. Michael's	8	8	18	8	4
St. John's.....	6	4	9	6	10
St. Silas'	2	6	1	5	10
St. Paul's	5	17	3	13	12
St. Peter's.....	7	7	6	6	6
St. Mary's ...	7	3	11	9	7
St. Matthew's	12	9	14	14	5
St. Thomas'*	8	20	13	7	9
Park	15	13	12	8	7
St. Luke's ...	7	11	6	15	9
St. Mark's ..	11	8	7	2	10
St. Andrew's	8	11	9	7	11
Total	121	138	140	121	124

* The Blackburn Union Workhouse is in this Ward.

DEATHS.

In the following Tables, VII. to XIV., will be found classification of deaths in Blackburn during 1915, according to age, disease, and locality. The chief rates for other large towns are also given.

During the year there were 2,078 deaths, of which 1,032 were males and 1,046 females.

Corrections have been made as regards the deaths of persons who belonged to outside districts and who died in Blackburn, of Blackburn residents who died in outside districts, and also of members of His Majesty's armed forces.

The total number of non-residents who died in institutions, &c., in this Borough was 164, as compared with 141 during 1914.

These non-residents came from the following districts, viz. : Darwen, 64; Oswaldtwistle, 20; Great Harwood, 11; Church, 6; Accrington, 5; Clitheroe, 8; Rishton, 12; Haslingden, 6; Livesey, 5; Clayton-le-Moors, 5; Mellor, 2; Ramsgreave, 3; Chatburn, 2; Tockholes, 2; Hoghton, Scarborough, Southport, Sheffield, Knuzden, Samlesbury, Padiham, Stacksteads, Latham, Pleasington, Osbaldeston, Nantwich, and Bradford, 1 each.

The number of deaths amongst Blackburn residents occurring in districts outside was 42, as compared with 67 during 1914.

These deaths occurred at the following places :—Lancaster Asylum, 11; Whittingham Asylum, 11; Prestwich Asylum, 2; at various places, chiefly in the neighbourhood, 20.

Deaths among members of His Majesty's Forces are excluded from the various Tables, even if they took place within the Borough.

The resulting death-rate was 16.1 per 1,000, as compared with 14.9 for the previous year.

Except where otherwise stated, the various death-rates for the Borough have been calculated on the estimated civil population (see pages 7 and 8).

The following were the death-rates per 1,000 living for England and Wales and for Blackburn during 1915 :—

England and Wales	15.1
96 Great Towns (including London) ...	15.6
148 Smaller Towns	14.0
England and Wales (less the 244 towns)..	14.8
Blackburn	16.1

Table X. gives the chief causes of death, and it will be noticed that Measles and Whooping Cough were more fatal during the year than during the previous two years.

It is also to be noted that deaths from Cancer showed a considerable increase.

TABLE VII.

Year.	Popu- lation in Census Years.	Popula- tion esti- mated to middle of year.	Birth Rate.	Death Rate.	Average Death rate in 10 year periods.	Year.	Popula- tion in Census Years.	Popula- tion esti- mated to middle of year.	Birth Rate.	Death Rate.	Average death rate in 10 year periods.
1841	36,629	36,849		29.9	29.02	1881	104,014	104,388	37.5	22.4	23.83
1842	...	37,742		25.0		1882	...	105,897	36.9	24.3	
1843	...	38,656		31.5		1883	...	107,427	40.0	23.9	
1844	...	39,593		28.8		1884	...	108,980	37.9	23.6	
1845	...	40,552		27.7		1885	...	110,555	36.1	21.3	
1846	...	41,534		35.7		1886	...	112,153	35.6	24.7	
1847	...	42,541		33.9		1887	...	113,774	36.5	25.3	
1848	...	43,571		27.8		1888	...	115,418	35.6	24.0	
1849	...	44,627		25.2		1889	...	117,086	35.5	25.4	
1850	...	45,708		28.7		1890	...	118,780	33.8	23.4	
1851	46,536	46,892	43.3	27.0	29.47	1891	120,064	120,245	33.9	25.9	21.32
1852	...	48,344	41.3	35.1		1892	...	120,972	32.0	21.0	
1853	...	49,841	42.7	35.2		1893	...	121,704	31.4	22.9	
1854	...	51,384	43.6	25.6		1894	...	122,440	29.5	17.7	
1855	...	52,974	41.7	33.6		1895	...	123,181	31.6	25.0	
1856	...	54,614	42.5	24.3		1896	...	123,926	28.6	18.3	
1857	...	56,306	42.1	32.2		1897	...	124,675	29.1	20.2	
1858	...	58,049	39.2	31.8		1898	...	125,430	29.1	19.4	
1859	...	59,846	41.4	25.8		1899	...	126,185	28.8	20.6	
1860	...	61,699	43.3	24.1		1900	...	126,951	27.0	22.2	
1861	63,126	63,434	43.7	27.9	27.83	+1901	129,216	129,311	26.1	19.2	16.8
1862	...	64,681	42.5	28.1		1902	...	129,689	25.8	17.3	
1863	...	65,953	38.9	21.8		1903	...	130,069	25.4	15.9	
1864	...	67,249	40.5	25.9		1904	...	130,451	23.7	17.4	
1865	...	68,572	39.9	27.4		1905	...	130,833	24.4	16.6	
1866	...	69,920	39.6	30.7		1906	...	131,216	26.0	16.7	
1867	...	71,294	40.8	27.5		1907	...	131,600	25.4	17.4	
1868	...	72,696	43.3	26.9		1908	...	131,986	25.8	16.3	
1869	...	74,125	40.5	31.5		1909	...	132,373	23.7	16.8	
1870	...	75,583	40.7	30.6		1910	...	132,760	22.2	14.6	
1871	76,339	76,695	41.1	26.5	26.5	1911	133,052	133,149	21.4	16.1	
1872	...	78,136	44.3	26.2		1912	...	133,539	20.4	14.4	
1873	...	79,604	40.5	30.9		1913	...	133,931	21.7	15.8	
1874	...	81,099	40.7	29.9		1914	...	134,323	20.8	14.9	
1875	...	82,624	41.2	26.6		1915	...	127,443	18.2	16.1	
1876	...	84,716	40.4	28.7							
1877	...	90,089	39.0	23.6							
1878	...	96,031	35.9	28.5							
1879	...	98,869	35.5	21.9							
1880	...	102,736	32.9	22.2							

* Part of Witton, Livesey, and Little Harwood—population 8,662.
Half of this has been added to 1877 population.

+ Part of Little Harwood and Lower Darwen—population 2,394.
Half of this has been added to year 1879 population.

- Part of Witton and Livesey added in November, 1901, and the Registrar General has added this to the 1901 Census figures.

Estimated civil population (the birth rate is calculated on the total population for 1914).

TABLE VIII.

Deaths arranged in Age Periods.

AGE PERIODS.	MALES.		FEMALES.	
	Deaths.	Death Rate	Deaths.	Death Rate
0-5	290	46·2	258	42·5
5-15	45	3·9	45	3·9
15-25	33	2·9	33	2·4
25-35	43	3·8	50	3·6
35-45	68	7·6	69	6·6
45-55	113	15·8	131	15·3
55-65	187	43·7	150	29·4
65-75	146	76·0	176	62·5
75 and upwards.	91	199·5	134	186·6

In calculating the rates in this Table, the estimated population has been taken, without making any allowance for persons who have joined His Majesty's Forces. The rates for the age-periods, 15-25, 25-35 and 35-45 will therefore be specially liable to error.

TABLE IX.
Monthly Births and Deaths.

Month.	Birth Rate.	Death Rate.	Measles.	Scarlet Fever	Whooping Cough.	Croup.	Typhoid Fever.	Diphtheria	Diarrhoea.	Lung Diseases.	Tuber- culosis.	All Other Diseases.
January	19·4	17·4	...	...	5	...	2	...	5	55	9	124
February ...	20·2	20·5	...	1	9	...	2	2	2	69	14	113
March	22·7	18·8	1	...	9	...	...	...	4	75	13	126
April	18·5	16·4	1	...	10	...	1	1	1	43	14	111
May	20·9	14·9	2	2	4	...	1	...	4	29	17	112
June	20·7	11·4	2	1	1	...	...	...	...	26	9	88
July	18·0	11·9	3	1	1	...	...	1	4	25	11	90
August	18·4	10·3	5	...	...	...	...	1	6	23	8	77
September	16·3	10·2	5	...	...	...	...	...	14	17	11	74
October.....	14·3	13·9	3	...	...	...	...	1	9	24	10	115
November...	15·2	16·9	14	...	...	...	..	1	6	45	16	111
December..	13·0	17·5	8	1	...	...	...	1	4	48	19	123

Table X.

CAUSE OF DEATH.	1909.	1910.	1911.	1912.	1913.	1914.	1915	Death Rate.
	Total De'ths	Total De'ths	Total De'ths	Total De'ths	Total De'ths	Total De'ths	Total De'ths	
Enteric Fever	18	9	8	7	8	7	6	0·04
Smallpox .....	...	1	...	...	...	...	...	0·00
Measles	41	39	28	52	10	20	44	0·34
Scarlet Fever	53	27	10	3	1	10	6	0·04
Whooping Cough	22	15	50	27	7	9	39	0·30
Diphtheria and Croup.....	18	22	28	9	7	7	8	0·06
Influenza	46	28	14	20	35	24	32	0·25
Erysipelas	2	3	2	2	1	3	...	0·00
Phthisis (Pulmonary Tuberculosis)	136	110	119	109	88	124	109	0·85
Tuberculous Meningitis ...	22	15	13	8	12	12	14	0·10
Other Tuberculous Diseases	41	41	32	25	37	20	28	0·21
Cancer, Malignant Disease	107	127	113	128	139	134	157	1·23
Rheumatic Fever.....	14	11	7	3	7	5	16	0·12
Meningitis	40	27	21	20	29	24	18	0·14
Organic Heart Disease...	187	160	181	182	234	256	232	1·82
Bronchitis	262	202	216	206	193	246	263	2·14
Pneumonia (all forms) ...	227	147	193	190	219	192	201	1·57
Other Diseases of respiratory organs	9	13	11	18	20	18	15	0·11
Diarrhoea and Enteritis ...	60	79	208	40	140	60	59	0·46
Appendicitis and Typhlitis	7	8	10	11	12	12	8	0·06
Cirrhosis of Liver	11	7	8	8	6	10	12	0·09
Alcoholism .....	...	6	7	4	6	3	2	0·01
Nephritis and Bright's Disease	68	65	60	63	84	82	72	0·56
Puerperal Fever	7	8	5	3	3	6	3	0·02
Other accidents and diseases of Pregnancy and Parturition	13	13	16	9	13	12	5	0·03
Congenital Debility and Malformation, including Premature Birth	128	131	171	144	141	137	112	0·87
Violent Deaths, excluding Suicide	49	38	41	52	53	45	33	0·25
Suicide.....	20	17	17	13	20	27	13	0·10
Other Defined Diseases...	596	541	701	532	533	451	502	3·15
Diseases ill-defined or unknown	30	39	60	39	61	50	53	0·41
Total	2234	1949	2149	1928	2119	2006	2062	16·17

TABLE XI.

Statistics for the various Wards in the Borough.

WARDS.	Popula- tion.	Births	Deaths	Birth Rate.	Death Rate.	Deaths under one year per 1000 Births.	Death- rate from six Zymotic Diseases.	Death- rate from Diar- rhea and Pneu- monia. Under 2 years	Death-rate from Pulmonary Tuberculosis.	Death-rate from Non-Pulmonary Tuberculosis.
ST. STEPHEN'S...	11565	208	163	17.1	14.1	144.2	0.77	0.25	1.03	0.08
TRINITY	9406	207	181	22.0	19.2	193.4	0.95	0.95	0.74	0.10
ST. MICHAEL'S..	9574	168	123	17.5	12.8	130.9	0.52	0.31	0.52	0.31
ST. JOHN'S	7699	143	94	18.6	12.2	125.8	0.65	0.13	1.03	0.26
ST. SILAS'	9871	124	116	12.5	11.7	72.5	0.30	0.00	0.50	0.20
ST. PAUL'S	10015	209	157	20.8	15.6	114.8	0.99	0.19	0.49	0.39
ST. PETER'S.....	6557	125	118	19.0	18.0	184.0	0.91	0.30	1.37	0.91
ST. MARY'S	6250	103	170	16.4	27.2	194.1	1.44	0.64	2.24	0.96
ST. MATTHEW'S	9832	200	168	20.3	17.0	160.0	0.71	0.81	0.40	0.30
ST. THOMAS' ...	13032	194	201	14.8	15.4	139.1	0.92	0.30	0.69	0.15
PARK	10051	225	149	22.3	14.8	128.8	0.79	0.39	0.99	0.69
ST. LUKE'S	8261	158	129	19.1	15.6	183.5	0.72	0.48	1.21	0.12
ST. MARK'S	11133	171	128	15.3	11.5	93.5	0.62	0.27	0.62	0.17
ST. ANDREW'S...	11470	217	165	18.9	14.3	175.1	0.61	0.34	0.34	0.17
BOROUGH	134716	2452	2062	18.2	15.3	145.6	0.76	0.37	0.80	0.31

The rates in this Table are calculated on the estimated total population without making allowance for those persons who have left the Borough to join His Majesty's Forces. They are therefore, except as regards the Infantile Mortality rate, somewhat inaccurate.

TABLE XII.

Birth-rates and Death-rates for 33 large towns.

TOWNS.	Birth Rate.	Death Rate.	Deaths under 1 year per 1000 births.	Death rate over one year.	Death rate from the six Zymotic diseases & Diarrhoea un. 2 yrs.	Death rate from Diarrhoea under 2 yrs	Death rate from Violence.	Inquest Cases percentage to total Deaths.	Uncertified cause of Death percentage to total Deaths.
London ...	22·5	16·0	111	13·5	1·57	0·56	0·73	10·1	0·1
West Ham	28·7	15·8	111	12·7	1·80	0·80	0·75	9·2	0·05
Croydon ...	20·1	13·1	83	11·4	1·09	0·30	0·44	10·4	0·00
Brighton...	16·8	16·1	95	14·7	0·70	0·19	0·65	10·0	0·02
Portsmouth	20·2	12·9	87	11·6	1·25	0·19	0·57	9·2	0·6
Plymouth...	20·0	16·2	117	13·8	1·38	0·30	0·59	7·8	0·02
Bristol.....	20·2	15·1	116	12·8	1·21	0·39	0·59	8·9	0·02
Cardiff.....	24·6	14·5	105	11·9	1·23	0·52	0·64	9·9	0·05
Swansea ...	25·3	13·3	105	10·7	0·73	0·32	0·43	9·0	0·07
W'h'mpton	24·6	16·8	133	13·7	2·07	0·41	0·42	6·5	0·0
B'rmingh'm	24·4	14·6	117	11·8	1·51	0·66	0·55	4·4	3·7
Norwich ...	20·0	14·4	114	12·1	0·92	0·33	0·59	6·7	0·1
Leicester...	20·7	14·4	124	11·9	1·32	0·77	0·57	6·4	0·4
Nottingh'm	20·7	14·9	129	12·2	1·14	0·54	0·59	5·9	0·5
Derby	21·6	14·4	93	12·4	1·24	0·29	0·39	9·8	0·0
Birkenhead	28·0	15·3	119	12·0	1·71	1·18	0·56	7·6	0·1
Liverpool...	28·1	18·5	132	14·6	1·95	0·99	0·67	6·4	2·8
Bolton	19·3	14·3	123	11·9	1·55	0·64	0·44	6·9	0·7
Manchester	22·8	16·4	125	13·5	1·63	0·62	0·61	7·4	0·4
Salford ...	22·8	17·2	131	14·1	2·47	0·80	0·54	7·6	0·07
Oldham ...	19·4	16·5	123	14·1	1·10	0·45	0·47	8·1	0·0
Burnley ...	18·2	15·5	165	12·5	1·57	0·94	0·51	7·5	0·3
Blackburn	18·2	16·1	145	12·6	1·14	0·37	0·35	6·9	1·1
Preston .	21·2	17·4	155	14·1	2·12	0·79	0·54	4·1	3·7
Hudd'sfield	17·2	15·9	108	14·1	0·74	0·29	0·47	5·4	0·6
Halifax ...	16·5	16·7	97	15·0	0·80	0·15	0·41	5·2	1·0
Bradford...	17·3	15·8	122	13·7	1·13	0·28	0·50	8·8	0·2
Leeds	21·6	16·4	125	13·7	1·31	0·60	0·75	9·2	0·02
Sheffield...	25·4	16·9	132	13·5	2·71	0·82	0·68	6·7	0·4
Hull.....	24·8	15·3	119	12·3	1·44	0·85	0·67	9·4	0·7
Sunderland	29·2	19·2	151	14·8	2·05	0·84	0·86	7·9	1·7
Gateshead.	30·3	19·4	145	15·0	2·82	1·20	0·59	3·9	5·5
Newcastle.	27·6	17·4	133	13·7	1·94	0·60	0·58	8·8	0·5

TABLE XIII.

Death-rates from Zymotic Diseases in 33 large towns.

	Small Pox.	Measles	Scarlet Fever.	Diph- theria.	W'ping Cough.	Enteric Fever.	Diarrhoea (under 2 years)
London ...	0·00	0·50	0·07	0·13	0·25	0·02	0·56
West Ham	0·00	0·50	0·04	0·22	0·19	0·04	0·80
Croydon ...	0·00	0·61	0·03	0·23	0·11	0·02	0·30
Brighton ...	0·00	0·10	0·01	0·03	0·30	0·07	0·19
Portsmouth	0·00	0·48	0·08	0·27	0·15	0·08	0·19
Plymouth ...	0·00	0·59	0·05	0·22	0·13	0·09	0·30
Bristol	0·017	0·29	0·05	0·09	0·35	0·03	0·39
Cardiff	0·00	0·19	0·06	0·24	0·18	0·02	0·52
Swansea ...	0·00	0·12	0·007	0·16	0·11	0·007	0·32
Wolverh'ton	0·00	1·37	0·02	0·14	0·11	0·01	0·41
Birmingham	0·00	0·48	0·06	0·16	0·14	0·03	0·66
Norwich ..	0·00	0·14	0·04	0·24	0·16	0·007	0·33
Leicester ...	0·00	0·33	0·05	0·11	0·08	0·02	0·77
Nottingham	0·00	0·21	0·05	0·05	0·26	0·02	0·54
Derby	0·00	0·56	0·10	0·16	0·16	0·007	0·29
Birkenhead	0·00	0·05	0·03	0·14	0·30	0·007	1·18
Liverpool ...	0·00	0·33	0·09	0·17	0·09	0·03	0·99
Bolton	0·00	0·32	0·02	0·23	0·24	0·09	0·64
Manchester	0·00	0·60	0·11	0·13	0·09	0·06	0·62
Salford ...	0·00	1·12	0·13	0·12	0·20	0·07	0·80
Oldham	0·00	0·30	0·11	0·12	0·10	0·02	0·45
Burnley	0·00	0·37	0·02	0·13	0·06	0·12	0·94
Blackburn	0·00	0·34	0·04	0·06	0·30	0·04	0·40
Preston	0·00	0·53	0·20	0·30	0·26	0·03	0·79
Huddersfield	0·00	0·20	0·00	0·16	0·08	0·01	0·29
Halifax	0·00	0·34	0·04	0·16	0·05	0·06	0·15
Bradford ...	0·00	0·34	0·08	0·18	0·18	0·06	0·28
Leeds	0·00	0·17	0·07	0·10	0·33	0·10	0·60
Sheffield ...	0·00	1·33	0·11	0·21	0·21	0·04	0·82
Hull	0·00	0·13	0·02	0·19	0·19	0·05	0·85
Sunderland	0·00	0·77	0·02	0·06	0·34	0·02	0·84
Gateshead..	0·00	1·08	0·10	0·15	0·24	0·04	1·20
Newcastle ..	0·00	0·77	0·14	0·09	0·26	0·04	0·60

TABLE XIV.

Showing Population, Birth-rates, and Death-rates, for
the last 20 years in Blackburn.

Year.	Esti- mated Popu- lation	Birth Rate.	Death Rate.	Death rate from Bron- chitis. Pneu- monia & Pleurisy.	Death-rate from Pulmonary Tuberculosis.	Death rate from other Tuber- cular Di-eases	Deaths under 1 year per 1000 Births.
1896	123,926	28·6	18·3	3·8	1·1	0·5	172
1897	124,675	29·1	20·2	4·0	1·1	0·7	207
1898	125,430	29·1	19·4	3·6	1·2	0·5	204
1899	126,185	28·8	20·6	4·4	1·2	0·5	193
1900	126,951	27·0	22·2	4·8	1·1	0·7	221
1901	129,311	26·1	19·2	3·7	1·1	0·7	193
1902	129,689	25·8	17·3	3·5	1·2	0·7	157
1903	130,069	25·4	15·9	3·4	0·9	0·6	158
1904	130,451	23·7	17·4	3·7	0·9	0·6	191
1905	130,833	24·4	16·6	3·1	1·0	0·6	146
1906	131,216	26·0	16·7	2·7	0·9	0·5	155
1907	131,600	25·4	17·4	3·7	1·0	0·6	151
1908	131,986	25·8	16·3	3·0	1·1	0·5	149
1909	132,373	23·7	16·8	3·7	1·0	0·4	127
1910	132,760	22·2	14·6	2·7	0·8	0·4	136
1911	133,149	21·4	16·1	3·1	0·8	0·3	186
1912	133,539	20·4	14·4	3·0	0·8	0·2	119
1913	133,931	21·7	15·8	3·1	0·6	0·3	147
1914	134,323	20·8	14·9	3·3	0·9	0·2	116
1915	127,443	18·2	16·1	3·6	0·8	0·3	145

Table XV.
Inquest Cases.

Natural Causes	68
Accidents	29
Suicide	14
Burns	11
Accidentally Drowned	7
Accidentally Suffocated	4
Septic Poisoning	3
Ptomaine Poisoning.....	2
Scalds	1
Stillbirth.....	1
Want of Attention at Birth	1
Wilful Murder	1
Manslaughter.....	1

Ages of persons burnt :—78 years, 75 years, 34 years, 14 years, 8 years, 6 years, 5 years, 3 years (four).

Ages of persons suffocated :—24 years, 17 weeks, 7 weeks, 4 days.

143 Inquests were held during the year, as compared with 131 during 1914.

INFANTILE MORTALITY.

During 1915 the death-rate of children under 1 year per 1,000 births was 145.6, as compared with 116.2 during 1914.

The Infantile Death-Rates for England and Wales during 1915 were as follow :—

	Deaths under 1 Year per 1,000 births.			
	1915.		1914.	
England and Wales	110	...	105	
96 Great Towns (including London) ...	117	...	113	
148 Smaller Towns	114	...	104	
England & Wales (less the 244 towns) ...	98	...	93	

It will thus be seen that the Infantile Mortality Rate for Blackburn for the year 1915 is considerably higher than that for the preceding year. Although a similar tendency for an increased rate is shown for England and Wales as a whole, this is much less marked than as regards Blackburn.

An examination of Table XVII. shows that Whooping Cough, Measles, and the two diseases, Bronchitis and Pneumonia, which are so frequently found as complications of Measles, stand out as the chief causes of the increased Infantile Mortality Rate.

Diarrhœa and Enteritis also accounted for a somewhat larger number of deaths during 1915 than during the preceding year.

On referring to Table XVI. it will be seen that, as compared with the year 1914, the relative increase in the infantile mortality rate for St. Silas' ward, in which the social conditions may be said to be the best in the Borough, was greater than that for the poorest wards such as St. St. Mary's, St. Peter's, Trinity, and St. Luke's.

The climatic conditions of 1915 were also somewhat more in favour of a higher Infantile Mortality Rate than during 1914, there being more sunshine and less rainfall.

It may be stated generally that it will be found on referring to the Infantile Mortality Rates for previous years that the years in which the rates were lowest were those when Diarrhœa, Measles, and Whooping Cough were not prevalent, and that the considerable fluctuations in the rate due to the presence or absence of these latter factors tend to mask any steady improvement which may be the result of improved sanitation and more zealous child welfare work.

Table XVI.

Infantile Mortality in Wards from 1906 to 1915.

WARD.	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	Average for 10 years.
St. Stephen's	157·3	126·8	137·8	101·9	101·8	157·3	113·5	120·8	121·2	144·2	128·2
Trinity ...	169·4	158·8	153·0	172·4	191·4	162·3	140·5	229·4	144·5	193·4	171·5
St. Michael's	133·0	130·2	120·1	102·4	101·5	96·4	81·4	78·5	131·2	130·9	110·5
St. John's	140·6	151·8	155·0	125·8	115·6	189·0	121·9	128·2	84·4	125·8	133·8
St. Silas'...	97·2	108·1	75·3	85·3	37·0	120·5	69·4	58·8	40·9	72·5	76·5
St. Paul's	127·8	140·4	146·7	137·0	135·1	194·6	122·3	142·8	100·4	114·8	136·1
St. Peter's	230·7	211·6	240·8	142·0	177·2	315·4	116·8	222·8	129·6	184·0	197·0
St. Mary's	257·6	262·1	185·1	171·7	226·0	280·5	115·9	222·9	142·8	194·1	206·5
St. Matthew's	133·5	144·8	143·3	114·0	141·0	180·6	115·7	142·8	140·2	160·0	141·5
St. Thomas's	135·8	125·4	127·3	114·2	129·4	172·1	105·4	132·3	80·7	139·1	126·1
Park ...	148·2	146·8	169·6	140·4	133·3	258·3	147·9	158·3	138·8	128·8	157·0
St. Luke's	2·4·5	204·9	147·8	127·7	173·0	212·2	168·5	144·8	140·6	183·5	172·7
St. Mark's	187·0	145·1	124·0	113·7	160·9	156·0	90·4	157·8	80·9	93·5	124·9
St. Andrew's	83·3	112·7	166·6	135·6	140·5	176·9	143·4	122·3	120·3	175·1	137·6
Borough...	155·9	151·7	149·3	127·4	136·0	186·9	119·2	147·8	116·2	145·6	143·6

TABLE XVII.
Death Rates under One year of age.

CAUSE OF DEATH.	Rates per 1,000 Births.									
	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Small-pox	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0
Chicken-pox	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0
Measles	4·6	4·1	1·1	3·1	3·0	1·7	4·7	1·7	1·7	5·3
Scarlet Fever.....	0·0	0·3	0·3	0·0	0·3	0·3	0·3	0·0	0·0	0·0
Whooping-cough ...	2·6	5·0	3·5	3·1	2·0	9·8	5·1	1·3	2·1	8·5
Diphtheria and Croup	0·5	0·6	0·3	0·3	0·0	0·3	0·0	0·0	0·3	0·0
Erysipelas	0·5	0·3	0·3	0·3	0·3	0·0	0·0	0·0	0·7	0·0
Tuberculous Meningitis	1·4	2·4	0·9	0·6	1·0	0·7	0·7	1·0	0·0	0·4
Abdominal Tuberculosis	4·0	5·3	4·3	3·4	4·7	1·0	2·1	4·1	1·4	2·0
Other Tuberculous Diseases ...	0·2	1·2	1·4	0·6	0·6	1·0	0·3	0·3	0·3	0·8
Meningitis (<i>not Tuberculous</i>) .	1·7	1·5	2·9	2·8	3·4	3·1	1·4	2·4	0·7	0·4
Convulsions	10·2	6·5	7·9	7·3	8·8	9·1	13·5	13·0	9·2	9·8
Laryngitis ..	0·0	0·3	0·3	0·3	0·0	1·0	0·0	1·0	0·3	0·8
Bronchitis	9·6	15·5	9·3	12·4	14·2	15·0	9·8	11·6	13·5	23·2
Pneumonia (all forms)	10·5	21·5	15·2	14·0	13·5	14·3	12·4	11·6	10·3	15·0
Diarrhœa	39·7	11·9	33·6	9·2	11·8	58·1	11·3	29·8	12·1	11·4
Enteritis	0·0	0·0	0·0	3·1	8·4	0·0	0·0	5·1	0·7	5·7
Gastritis	0·0	0·0	0·0	1·6	0·0	0·0	0·0	0·0	0·7	2·0
Syphilis	1·1	0·9	0·9	0·9	0·6	1·4	0·7	1·7	0·3	0·8
Rickets	0·9	0·6	0·6	0·3	0·3	0·7	0·0	0·3	0·7	1·2
Suffocation, overlying	1·1	2·0	3·5	2·2	0·6	0·7	1·0	1·0	1·7	1·2
Injury at Birth	0·2	0·3	0·3	0·6	1·0	0·0	0·0	0·3	1·7	0·8
Atelectasis	0·5	2·6	0·3	1·2	1·3	0·3	1·0	1·7	1·7	2·0
Congenital Malformations	4·4	6·2	7·0	7·0	4·7	4·9	4·3	1·0	5·0	6·1
Premature Birth	21·0	23·0	19·3	19·4	21·3	25·5	24·0	20·5	20·7	22·8
Atrophy, Debility and Marasmus	20·7	14·3	22·8	12·1	14·9	25·9	19·3	25·4	22·1	15·0
Other causes	19·3	24·7	12·8	20·7	18·3	11·5	6·5	12·3	7·4	10·6

TABLE XVIII.
Infantile Mortality Rates in Blackburn.

Year.	Rate per 1000 Births.	
1881	181	177
1882	205	
1883	185	
1884	173	
1885	142	
1886	157	193
1887	204	
1888	190	
1889	221	
1890	194	
1891	207	210
1892	199	
1893	241	
1894	168	
1895	235	
1896	172	199
1897	207	
1898	204	
1899	193	
1900	221	
1901	193	169
1902	157	
1903	158	
1904	191	
1905	146	
1906	155	143
1907	151	
1908	149	
1909	127	
1910	136	
1911	186	142
1912	119	
1913	147	
1914	116	
1915	145	

Table XIX.

Investigation of Children who attained or should have attained the age of 6 months during the year (*i.e.*, children born from July 2nd, 1914, to June 30th, 1915).

Number of children who should have attained the age of 6 months during the year 1915	2675
Number of children who attained the age of 6 months during the year and were investigated	2102
Number of children who died before attaining 6 months of age and were investigated	253
Number of children who were not visited or could not be traced	320

A.—CHILDREN OF INDUSTRIAL MOTHERS (*i.e.*, Mothers engaged in work away from home) ... 1233 investigated.

Condition of child at end of 6 months.	FEEDING.															Not fed.	Time work discontinued before and resumed after confinement.										Nursed away from home		Cleanliness of child			Cleanliness of home		
	Percentage of the 1233 children investigated.	Entirely breast fed.	Partly breast and partly artificially fed.												Entirely artificially fed.		Ceased work before confinement.						Resumed work after confinement.				Yes	No	Good	Medium	Bad	Good	Medium	Bad
			Breast feeding alone up to end of						Breast jointly with artificial feeding up to end of								Under 1 week	Over 1 week and under 1 month	Over 1 month and under 2 months	Over 2 months and under 3 months	Over 3 months	Under 1 week	Over 1 week and under 1 month	Over 1 month and under 2 months	Over 2 months and under 3 months	Over 3 months								
			3 weeks	1st month	2nd month	3rd month	4th month	5th month	1st month	2nd month	3rd month	4th month	5th month	6th month																				
Satisfactory	65.9	26.6	2.5	17.4	13.1	9.4	2.7	2.7	3.4	2.9	4.0	2.8	2.8	15.3	20.0	...	4.6	14.0	29.2	23.1	26.0	0.0	0.6	16.0	11.3	24.3	65.9	34.0	86.8	11.8	1.3	77.3	18.3	4.3
Fairly satisfactory	18.4	9.2	5.7	12.7	15.4	8.8	3.5	3.5	2.2	3.5	5.7	3.0	1.3	13.2	36.5	...	3.5	10.1	22.9	16.3	36.5	0.0	0.4	22.0	11.4	25.5	63.4	36.5	65.6	29.5	4.8	54.2	32.1	13.6
Unsatisfactory	4.3	5.6	3.7	17.0	15.0	7.5	1.9	0.0	5.6	3.7	9.4	5.6	1.9	7.5	39.6	...	7.5	7.5	15.0	30.1	30.1	0.0	0.0	15.0	17.0	20.7	73.6	26.4	56.6	30.1	13.2	37.7	43.4	18.8
Dead	11.3	17.1	5.0	11.4	3.5	1.4	0.7	0.0	2.1	0.7	1.4	0.0	0.0	0.0	42.8	14.2	11.4	17.1	32.8	13.5	22.1	0.0	0.0	10.0	0.7	0.7	96.4	3.5	54.2	12.8	1.4	72.8	19.3	7.8

B.—CHILDREN OF NON-INDUSTRIAL MOTHERS (*i.e.*, Mothers not engaged in work away from home) ... 1122.

Condition of child at end of 6 months.	FEEDING.															Not fed.	Cleanliness of child			Cleanliness of home		
	Percentage of the 1122 children investigated.	Entirely breast fed.	Partly breast and partly artificially fed.												Entirely artificially fed.		Good	Medium	Bad	Good	Medium	Bad
			Breast feeding alone up to end of						Breast jointly with artificial feeding up to end of													
			3 weeks	1st month	2nd month	3rd month	4th month	5th month	1st month	2nd month	3rd month	4th month	5th month	6th month								
Satisfactory	72.1	51.4	2.6	5.8	6.5	5.6	2.2	1.7	0.4	0.6	0.9	0.8	2.6	5.6	19.7	...	87.4	10.8	1.7	81.3	14.8	3.8
Fairly satisfactory	13.9	34.0	2.5	11.5	6.4	5.1	2.5	2.5	1.2	1.9	0.6	1.2	1.2	7.6	32.6	...	70.5	21.8	7.6	60.9	23.7	15.3
Unsatisfactory	3.9	15.9	6.8	15.9	13.6	6.8	6.8	4.5	4.5	0.0	0.0	2.2	0.0	13.6	25.0	...	56.8	31.8	11.3	50.0	25.0	25.0
Dead	10.0	20.3	6.2	7.0	3.5	2.6	0.8	0.0	0.8	0.8	1.7	0.0	0.0	0.0	30.9	24.7	50.4	14.1	2.6	67.2	23.9	8.8

As in the Annual Report for 1914, the following table was compiled with a view to showing what effect, if any, engagement of mothers away from home had on their children during the first 6 months of life. According to these figures, there is only slight evidence that the children of industrial mothers suffer as compared with those of non-industrial mothers, at any rate up to 6 months of age. They show, however, that when the mother is engaged away from home, artificial feeding tends to replace breast feeding to a considerable extent, and the effect of this may not become evident until after the first six months of life.

With a view to ascertaining further what influence the mother's working away from home may have had on the child, the children referred to in Table 23 of last year's Annual Report were followed up during the year and their condition between the ages of 18 and 24 months ascertained by the Health Visitors. Table XX. gives the results of this investigation.

This Table gives some evidence that the children of industrial mothers do suffer as compared with those of non-industrial mothers, a somewhat larger proportion of the former dying before reaching the age of 18 months and a somewhat larger proportion of those living at that age being in a less satisfactory state of health.

Table XX

Investigation of Children who attained or should have attained the age of 18 to 24 months* during the year 1915.

(This is a further following up of children referred to in Table XXIII. of the Annual Report for 1914.)

Number of children investigated between the 18th and 24th month of their age	1648 (259 of the 1907 children referred to in the Report for 1914 were untraceable.)
------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------

Number of these children who were living	1220
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Number of these children who had died	428
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[illegible]

*As it was impossible to visit all the children at a fixed age the period 18 to 24 months was chosen

LOCAL GOVERNMENT BOARD TABLES—

I.—Vital Statistics of the whole Borough during 1915 and previous years ;

II.—Cases of Infectious Disease notified during 1915 ;

III.—Causes of, and Ages at Death, during 1915 ;

IV.—Deaths under One Year during 1915 ;

are given in Appendix A, Tables I., II., III.(a), III.(b), and IV.

STATISTICS OF ENUMERATION DISTRICTS are given in Appendix B, Tables I., II., and III. The Area of each District is described in the Annual Report for 1913.

DEATHS OF PERSONS, CLASSIFIED ACCORDING TO CAUSE AND OCCUPATION are given in Appendix C.

Section II.

MATERNITY AND CHILD WELFARE WORK.

This work is carried out by the 4 Lady Health Visitors, 2 of whom also perform the duties of Inspectors of Midwives.

The work may be divided into the following sections :—

- (1) Home Visiting of Infants.
- (2) Work at the Maternity and Child Welfare Centres.
- (3) Supervision of Midwives.
- (4) Other Maternity Work.

I.—HOME VISITING OF INFANTS.

The Notification of Births Act, which has been in force in this Borough since 1908, enables the Department to obtain early information of all births, and the four Lady Health Visitors have visited the homes where 2,293 of the 2,452 births registered during the year have occurred.

2,208 of the infants visited were legitimate, and 85 illegitimate. The illegitimate births are referred to on page 14.

It will thus be seen that the large majority of infants born in the Borough are visited. If a doctor is not in attendance at the birth, the first visit is paid during the mother's lying-in period, and by this means not only are particulars obtained about the child and advice given to the mother concerning its feeding and general welfare, but also the work of the midwife is supervised.

Efforts are made to induce the mother to undertake breast feeding and, if for one reason or another this is impossible, advice is given on the artificial feeding of the infant.

Subsequent visits are paid to the child during the first two years of its life, the number of which depending upon the conditions of each individual case; but every child is visited at birth, at the end of the 3rd and 6th month, and between the age of 18 and 24 months.

At these subsequent visits, 5,926 of which were paid during the year, attention is also given to the general hygiene of the home.

2.—WORK AT THE MATERNITY AND CHILD WELFARE CENTRES.

Two of these centres have been open during the year, namely, one at the Health Office, Town Hall, and the other at No. 43, Copy Nook.

A third centre is about to be opened at No. 119, Bolton Road.

Each centre is situated, as far as possible, in the midst of a poor and populous district.

The centres have been open on one afternoon a week, from 2-30 to 4 p.m. They are under the control of the Medical Officer of Health, and are conducted by the Health Visitor of the district in which the centre is situate, with the assistance of one of the other Health Visitors. At the centre the children are weighed by the Health Visitor and advice is given to the mothers as to the feeding and care of their infants. Short talks or popular lectures on health matters generally are also given by the Medical Officer of Health or other members of the staff of the Health Department. Mothers are also encouraged to bring older children who are under school age to the centres.

It is also hoped that expectant mothers will be induced to attend the centres, so that they may receive advice as to the care of themselves during pregnancy and as to their preparation for maternity, but up to the present very few have attended.

The medical practitioners of the Borough have undertaken to give their services gratuitously in connection with these centres, and a practitioner holds a clinic at each centre so that mothers individually can consult him and obtain medical advice as to their babies.

Expectant mothers can also consult the Doctor, and precautions can be taken to insure, as far as possible, against complications arising in connection with the confinement.

At Copy Nook Centre, Miss Lowe has on view a model set of clothing for infants. Patterns of the various garments are supplied to mothers and assistance is given in the cutting out and making of the various articles.

During the year also special stress has been laid on the economical and proper selection and cooking of food.

The Nursing Mothers' Aid Society has continued to carry on the useful work, referred to in previous Reports, at its restaurant in Adelaide Street.

MATERNITY AND CHILD WELFARE CENTRES.

Particulars as to the work carried on at the Centres.

	Health Office. Copy Nook.		
No. of Sessions	49	..	41
Number of Infants attending under the age of 12 months	120	..	139
Average Attendance of Infants under 12 months of age per Session	9.1	...	15.3
No. of Children attending over the age of 12 months	9	...	22
Average Attendance of Children over 12 months of age per Session	0.36	...	1.1
No. of Expectant Mothers attending ...	0	...	4

3.—SUPERVISION OF MIDWIVES.

Two of the Health Visitors, *i.e.*, Miss St. Stephens and Miss Lowe, also carry out the duties of Inspectors of Midwives.

This work includes the following :—

- (a) Inspection of registers and case books kept by the Midwives, the condition of their appliances and instruments, and the cleanliness of their persons and of their homes.
- (b) The supervision of their work at the labours and during the lying-in period.
- (c) Instruction of the Midwives in matters pertaining to their work.
- (d) Investigation of cases of Puerperal Fever, Ophthalmia Neonatorum and of any cases in which it is suspected that the Midwife has not carried out her duties in a proper manner.

89 visits were paid to Midwives practising within the Borough during the year.

45 Midwives notified their intention to practice during the year. Of these, 3 removed and 2 resigned, leaving 40 names on the register at the end of the year.

Five of the 40 Midwives acted as maternity nurses only.

Of the 45 Midwives, 21 have been trained and have obtained certificates after examination; the remainder are on the Midwives' Roll by virtue of their having been in practice previous to the passing of the Midwives' Act, 1902. Seven of the Midwives are too illiterate to write up their cases in the case books and 1 is incapable of recording pulse or temperature.

All the Midwives wear washable dresses and aprons, and carry bags fitted with the necessary appliances.

In 6 instances the Midwife has failed to comply with one or other of the Rules of the Central Midwives' Board, and has been either interviewed or written to on the matter by the Medical Officer of Health.

In 1 case the Midwife was reported to the Central Midwives' Board for a breach of their rules. The Board reprimanded the Midwife, and asked for reports on her conduct and method of practice at the end of 3 and 6 months.

No cases of Puerperal Fever occurred in a Midwife's practice during the year.

5 cases of Ophthalmia and 8 of slight inflammation of the eyes have occurred in the Midwives' practice.

In a few instances "handy women" have acted as Midwives in cases of emergency, but as a rule a medical man or Midwife has taken charge of the case after the emergency has been dealt with. In every instance the "handy woman" has been cautioned against acting as a Midwife.

On the whole the Midwives' work has been carried out in a satisfactory manner.

Two of the Midwives did not practice during the year, and were therefore not inspected. 1 resigned before inspection.

The following particulars relate to the 37 Midwives inspected :—

CONDITION OF BAGS.

Satisfactory	27
Fairly satisfactory	7
Unsatisfactory	3—37

CONDITION OF CASE BOOKS.

Satisfactory	21
Fairly satisfactory	9
Unsatisfactory	7—37

TEMPERATURE CHARTS.

Satisfactory	22
Fairly satisfactory	7
Unsatisfactory	7—36

CLEANLINESS OF HOUSE.

Satisfactory	30
Fairly satisfactory	7
Unsatisfactory	0—37

CLEANLINESS OF PERSON.

Satisfactory	30
Fairly satisfactory	7
Unsatisfactory	0—37

Number of Midwives' Houses with Bathrooms	15
----------------------------------------------------	----

PROPORTION OF BIRTHS ATTENDED BY DOCTORS AND MIDWIVES
RESPECTIVELY.

Of the 2,452 Births registered during the year :—

A Doctor

was engaged for and conducted the labour in 920 cases.

A Midwife

„ „ „ 1,513 „

A Handywoman conducted labour in 14 „

Children born in workhouse and no particulars
obtained 5 „

No. of instances a Midwife called in a Doctor
during labour 119

No. of instances a Midwife called in a Doctor
after labour :—

(a) on account of mother's condition 74

(b) on account of child's condition 77

4.—OTHER MATERNITY WORK.

98 expectant mothers have been visited at their homes on
one or more occasions. The majority of these cases were

reported to the Health Department by the War Relief Committee, so that it could be ascertained in what direction relief could best be given. At the same time the Inspectors of Midwives were able at their visits to give these expectant mothers advice in connection with their preparation for maternity.

Maternity bags, supplied by the War Relief Committee, were given out on 39 occasions by the Inspectors. These bags are lent for the confinement in cases of poverty.

Table XXI.—Deaths in Childbed during the last Five Years.

Cause of Death.	1911	1912	1913	1914	1915
Abortion	1	2	1	1	...
Hæmorrhage .....	...	...	1	...	...
Uncontrollable Vomiting .....	...	...	...	...	...
Ectopic Gestation.....	...	...	1	...	...
Other Accidents of Pregnancy .....	...	1	...	1	...
Puerperal Hæmorrhage ..	3	1	...	1	1
Other Accidents of Child Birth.....	7	2	5	9	3
Puerperal Fever ...	5	3	3	6	3
Puerperal Nephritis and Uræmia .....	...	...	1	...	...
Puerperal Albuminuria and Brights Disease .....	...	...	...	...	...
Puerperal Convulsions	3	3	3	...	1
Puerperal Phlegmasia, Alba-dolens, and Phlebitis .....	...	...	...	...	...
Puerperal Embolism and Sudden Death	2	...	1	...	...
Puerperal Insanity .....	...	...	...	...	...
Puerperal Diseases of Breast.....	...	...	...	...	...
Total	21	12	16	18	8

Section III.

INFECTIOUS DISEASES .....	46 to 87

The death-rates for the principal infectious diseases per 1,000 living during 1915 are given below, and compared with the average rates for the 96 great towns of England and Wales :—

	96 Large Towns.	Black-burn.
Smallpox.....	0·00	0·00
Measles	0·50	0·34
Scarlet Fever	0·07	0·04
Whooping Cough	0·23	0·30
Typhoid Fever ..	0·03	0·04
Diphtheria	0·16	0·06
Diarrhœa and Enteritis { per 1000 population	0·55	0·40
under 2 years. { per 1000 births ...	25·57	20·8

It will be seen on reference to Table XXII. that 617 cases were notified by Medical Practitioners under the Infectious Diseases Notification Act, and 301 under the Public Health (Tuberculosis) Regulations. 19 cases of Ophthalmia Neonatorum were also notified under the Public Health (Ophthalmia Neonatorum) Regulations.

It will be noted in Table XXII that there was a marked diminution in the number of cases of Diphtheria notified during the year, the number being lower than in any year since 1898.

TABLE XXII.

Shewing number of cases of Infectious Diseases notified from 1898 to 1915.

Disease.	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Smallpox .....	...	...	23	...	49	92	2	4	...	1	...	2	1	...	...	...	...	...
Diphtheria (including Membranous Croup)	77	229	334	284	83	132	60	157	166	150	100	102	96	107	55	76	62	39
Erysipelas ...	...	...	...	...	76	66	81	132	112	99	81	94	90	77	87	90	97	69
Scarlet Fever...	347	615	1476	1117	494	339	458	1578	849	544	595	1013	795	343	116	268	704	460
Enteric Fever	228	233	163	131	127	97	111	90	82	61	85	69	46	49	26	31	31	44
Puerperal Fever...	7	13	14	11	18	11	7	24	12	25	11	11	10	9	9	8	10	5
Typhus Fever	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro Spinal Meningitis...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Poliomylitis..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	..
Pulmonary Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	217	230	212	213
Other forms of Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	104	60	88
Ophthalmia Neonatorum	..	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	15	19
Totals	659	1091	2010	1543	847	737	719	1985	1221	880	872	1291	1038	585	515	808	1191	937

SMALLPOX AND VACCINATION.

There has been no case of Smallpox in the Borough during the year. The last case occurred in 1916.

As pointed out in previous Reports, the portion of the population of Blackburn which is susceptible to the infection of Smallpox is becoming considerably greater, owing to the increasing number of exemptions from vaccination obtained during recent years. Consequently, should the disease be introduced into the Borough, there will be a great risk of an extensive outbreak unless the early cases are immediately brought to the notice of the Health Department and their prompt isolation effected.

It will be seen from Table XXIV. that for recent years only about one quarter of the children born have been successfully vaccinated.

TABLE XXIII.

Smallpox.

Year.	Cases Notified.	Deaths.	Mortality per 1,000 Population.
1883	4	0	·00
1884	0	0	·00
1885	4	0	·00
1886	28	2	·01
1887	42	4	·03
1888	98	10	·08
1889	0	0	·00
1890	0	0	·00
1891	0	0	·00
1892	4	2	·01
1893	79	8	·06
1894	13	0	·00
1895	0	0	·00
1896	0	0	·00
1897	0	0	·00
1898	0	0	·00
1899	0	0	·00
1900	13	2	·01
1901	0	0	·00
1902	49	2	·01
1903	92	3	·02
1904	2	0	·00
1905	4	0	·00
1906	0	0	·00
1907	1	0	·00
1908	0	0	·00
1909	2	0	·00
1910	1	1	·007
1911	0	0	·00
1912	0	0	·00
1913	0	0	·00
1914	0	0	·00
1915	0	0	·00

TABLE XXIV.

Vaccination—For 1897—1915.

Year	Births.	S'ccessfully Vaccinated	Died Un- vaccinated	Insus- ceptible	Postponed	Exempted	Removed out of District and traced.	Removed and not traced.
1897	3629	2301	451	17	137	...	...	723
1898	3662	2459	655	3	153	164	...	228
1899	3643	2616	519	9	191	139	51	118
1900	3438	2687	416	8	52	120	56	47
1901	3386	2640	408	18	76	158	19	40
1902	3357	2635	329	13	68	128	20	56
1903	3304	2330	304	20	53	117	24	28
1904	3100	2181	353	12	63	120	13	50
1905	3193	2274	290	17	39	190	7	29
1906	3418	2264	337	9	61	305	7	60
1907	3348	1828	311	4	57	407	9	70
1908	3415	1442	349	4	47	887	14	77
1909	3139	1200	244	7	44	980	3	7
1910	2948	996	234	3	32	1159	23	109
1911	2857	718	290	12	52	1233	26	463
1912	2741	689	213	10	25	1485	17	302
1913	2923	715	325	6	38	1491	4	13
1914	2814	778	276	3	36	1398	12	15
1915	2455	696	208	2	35	1160	12	9

TABLE XXV.

Vaccination Returns for the Year 1915.

MONTH.	Births.	Vaccinations.	Exemptions.	Removals not traced.	Removed and traced out of district.	Insusceptible.	Postponements.	Unaccounted for not Vaccinated.	Died Unvaccinated.	Successfully Vaccinated each Quarter.
January ..	223	78	107	1	1	1	6	7	22	} 229
February	209	66	108	1	1	...	4	6	23	
March	261	85	133	...	...	...	6	9	28
April	204	69	99	1	1	...	4	6	24	} 242
May.....	242	82	124	1	1	...	5	11	18	
June	230	91	102	2	1	...	3	12	19	
July	207	65	113	1	1	...	2	7	18	} 180
August ...	211	60	111	1	...	...	1	23	15
September	183	55	89	1	4	1	2	22	9	
October ...	165	23	75	...	1	...	1	52	13	} 45
November	169	13	76	...	1	...	1	70	8	
December	151	9	23	...	...	...	...	108	11
Totals ...	2455	696	1160	9	12	2	35	333	208	696

SCARLET FEVER.

The number of cases notified during the year 1915 was 460, as compared with 704 during 1914 and 268 during 1913.

10 of the cases occurred in public institutions as follows :—

- 5 in the Blackburn Royal Infirmary.
- 2 in the Blackburn Fever Hospital.
- 3 in the Blackburn Union Infirmary.

The following were the cases and deaths in age-periods during 1915 :—

Age Period	0-1	1-2	2-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	TOTAL
Cases ..	2	8	103	234	80	17	5	7	3	1	460
Death ...	...	...	4	1	1	...	...	...	...	...	6

Scarlet Fever was less prevalent in the Borough than during the preceding year, and the general type of the disease continued to be mild. 6 deaths occurred among the 460 cases, giving a case mortality of 1.3%. As in previous years, the mildness of the disease, however, has tended to its spread, many of the cases being so slight and indefinite as to remain undetected, and thus through non-isolation infecting others.

Owing to parents in some instances not calling in a doctor to cases of slight sore throat accompanied with perhaps only a faint rash, and owing to the symptoms in other instances being so indefinite that the doctors have hesitated to notify the cases until the peeling has determined their nature, many cases of Scarlet Fever have not been notified to the Health Department until the disease was well advanced. Considerable spread of infection may therefore have occurred through insufficient precautions and isolation having been taken at home.

Among the 460 cases notified, no rash was said to have been noticed by parents or doctor in 29 instances. Of the 421 cases, in which a rash was seen and which occurred outside public institutions—

76 cases were notified on the 1st day of the rash.					
130	„	„	„	2nd	„
93	„	„	„	3rd	„
45	„	„	„	4th	„
24	„	„	„	5th	„
10	„	„	„	6th	„
20	„	„	from the 7th to the 14th day after the first appearance of rash.		
17	„	„	from the 15th to the 23rd day after the first appearance of rash.		
6	„	„	from the 27th to the 64th day after the first appearance of rash.		

Of the 77 cases notified on and after the 5th day of the rash, the delay was on the part of the doctor in 39 cases, of the doctor and parent in 17 cases, and of the parent in 21 cases.

As with the majority of infectious diseases, the early days of illness are those during which infection is chiefly given off, and until parents take prompt action in calling in a doctor immediately any rash appears, and until full precautions are taken with respect to doubtful cases during the period required to clear up the definite nature of the illness, it will be impossible to prevent the spread of this disease. It would be very helpful if doctors would informally report to the Health Department doubtful cases, so that the taking of adequate precautions in the way of isolation could be more fully insured.

All children who were absent from School on account of sore throat and not under medical care, have been examined at the Health Office, in order to make sure that they were

not suffering from a mild form of the disease. By this precaution several cases were detected and prevented from returning to school and spreading the disease.

The onset of Scarlet Fever is marked by vomiting, sore throat, and the general signs of feverishness. Within 36 hours, as a rule, the characteristic rash appears, but in the mild form of the disease the rash may be so slight as to escape notice. It is, therefore, very necessary during the prevalence of Scarlet Fever for parents to seek medical aid in all cases of sore throat, especially if accompanied by vomiting and feverishness. Otherwise mild cases of the disease are sure to be overlooked.

Within recent years those who have had large experience in dealing with Scarlet Fever have come to the very definite opinion that uncomplicated cases of the disease can be safely discharged from Hospital at the end of the 4th week of the disease, provided patients are not sent home directly from a ward containing acute or complicated cases of the disease. This policy has been adopted in this Borough during the last two years with good results.

The parents are, however, requested to keep the discharged case away from other children as far as possible during the fortnight following their leaving Hospital, and the patients are also seen at the Health Office at the end of this period to ascertain if they are quite fit to return to School.

The following are the cases, arranged in months and quarters, for 1915 and compared with similar periods for 1914 :—

	Jan.	Feb.	Mar.	Apl.	May	June
1915 :	51	29	43	18	17	47
1914 :	75	82	82	46	62	53

	July	Aug.	Sept.	Oct.	Nov.	Dec.
1915 :	28	18	48	60	61	40
1914 :	71	54	32	38	57	52

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
1915 :	123	82	94	161
1914 :	229	161	157	147

The number of cases in individual houses was as follows :—

In	2	houses	there	were	4	cases.
„	7		„		3	„
„	43		„		2	„
„	335		„		was	1 case.

No milk supply was ascertained to have any effect in causing the spread of the disease during the year.

TABLE XXVI.

Scarlet Fever.

Year.	Cases notified.	Deaths.	Mortality per 1,000 population.
1879	.....	175	1'77
1880	.. ...	74	'72
1881	103	23	'22
1882	331	47	'44
1883	275	41	'38
1884	211	45	'41
1885	181	23	'20
1886	422	26	'23
1887	1695	157	1'38
1888	829	175	1'51
1889	737	123	1'05
1890	324	32	'26
1891	196	13	'10
1892	176	13	'10
1893	190	4	'03
1894	156	10	'07
1895	224	8	'06
1896	287	9	'06
1897	185	7	'05
1898	347	16	'12
1899	615	14	'10
1900	1476	83	'65
1901	1117	58	'44
1902	494	31	'23
1903	339	13	'09
1904	458	13	'09
1905	1578	76	'58
1906	849	33	'25
1907	544	21	'15
1908	595	20	'15
1909	1013	53	'40
1910	795	27	'20
1911	343	10	'07
1912	116	3	'02
1913	268	1	'007
1914	704	10	'07
1915	460	6	'04

DIPHTHERIA AND MEMBRANOUS CROUP.

The number of cases notified during the year was 39, compared with 62 during 1914 and 76 during 1913.

There were 8 deaths among the 39 cases, or a case mortality of 20.5 per cent., as compared with a case mortality of 11.2 per cent. during 1914.

The death-rate from Diphtheria during 1915 was 0.06 per 1,000 of the population, compared with 0.05 during 1914.

The following are the cases and deaths in age-periods :—

Age Periods in Years.	Notified Cases.		Deaths.	
0—1	1	1	0	0
1—2	3	18	2	6
2—3	5		1	
3—4	5		2	
4—5	5		1	
5—6	6	10	2	2
6—7	2		0	
7—8	0		0	
8—9	2		0	
9—10	0		0	
10—15	5	5	0	
15—20	1	1	0	
20—25	1	1	0	
25—35	1	1	0	
35—45	2	2	0	
45—55	0	0	0	
		<hr/>		<hr/>
		39		8

The following are the cases of Diphtheria, arranged in months, for the years 1914 and 1915 :—

	Jan.	Feb.	Mar.	Apl.	May	June
1914 :	5	4	9	4	2	4
1915 :	2	4	8	3	0	1

	July	Aug.	Sept.	Oct.	Nov.	Dec.
1914 :	1	4	10	7	10	2
1915 :	3	2	4	4	5	3
Total for 1915 : 39.			Total for 1914 : 62.			

These 39 cases occurred at 38 houses.

The drains were tested at all these houses. Defects were found at 11 houses, and immediate steps taken to remedy the same.

Other insanitary conditions were also remedied.

Although these precautions are taken as regards the drains and other insanitary conditions, it is exceedingly probable that the chief cause of the spread of the disease is direct infection from a previous case. As occurs in connection with Scarlet Fever, the mild undetected cases are those which are responsible for the chief spread of the disease.

BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

Number of Swabbings taken by Medical Practitioners for Bacteriological Examination	94
Number of Swabbings taken by Medical Practitioners before final disinfection	4

As the symptoms of Diphtheria are frequently very slight, and consist chiefly in sore throat, the remarks made under the heading of Scarlet Fever as to the need for the prompt calling in of a Medical Practitioner in cases of sore throat, also apply to Diphtheria. The failure to recognise any case of Diphtheria as such not only leads to the spread of infection but also jeopardises the patient's chances of recovery, as, for its success, anti-toxin requires to be given at the first onset of the disease.

One would like to see the more frequent appeal to bacteriology in cases of sore throat, for what appears to be an ordinary sore throat is often found, on bacteriological examination, to be due to Diphtheria.

TABLE XXVII.

Diphtheria.

Year.	Cases Notified.	Deaths.	Mortality per 1,000 Population.
1884	.....	1	0.009
1885	.....	1	0.009
1886	.....	...	0.00
1887	.....	1	0.008
1888	.....	1	0.008
1889	4	4	0.03
1890	5	4	0.03
1891	1	...	0.00
1892	3	1	0.008
1893	3	2	0.01
1894	40	14	0.11
1895	31	7	0.05
1896	25	10	0.08
1897	15	5	0.04
1898	77	32	0.25
1899	229	74	0.58
1900	334	91	0.11
1901	284	62	0.47
1902	83	23	0.17
1903	132	26	0.19
1904	60	11	0.08
1905	157	33	0.25
1906	166	26	0.19
1907	150	17	0.12
1908	100	12	0.09
1909	102	18	0.13
1910	96	22	0.16
1911	107	28	0.21
1912	55	9	0.06
1913	76	7	0.05
1914	62	7	0.05
1915	39	8	0.06

TYPHOID OR ENTERIC FEVER.

The number of cases notified during the year was 44, compared with 31 for the year 1914.

There were 6 deaths during 1915, compared with 7 deaths during 1914, giving a case mortality of 13.6 per cent.

Age Periods.	Cases. Notified.	Deaths.	Case Mortality per cent.
0—1	0	0	0.0
1—2	0	0	0.0
2—3	1	0	0.0
3—4	0	0	0.0
4—5	1	0	0.0
5—6	0	0	0.0
6—7	2	1	50.0
7—8	1	0	0.0
8—9	2	1	50.0
9—10	3	0	0.0
10—15	4	0	0.0
15—20	4	0	0.0
20—25	1	0	0.0
25—35	9	0	0.0
35—45	10	1	10.0
45—55	4	1	25.0
55 & upwards..	2	2	100.0
	—	—	—
	44	6	13.6

Of the 44 notified cases, 14 were ascertained to have eaten shellfish, and not to have been exposed to any known source of infection.

In several of these 14 cases one hesitated to ascribe infection to the shellfish, because this was said to have been

cooked, but on making further enquiries it was ascertained that the cooking was frequently insufficient to kill the germs present in the interior of the fish. As a rule the mussels and cockles are only subjected to momentary scalding with boiling water, which is immediately poured off the fish.

Under the powers given in the Blackburn Corporation Act, 1908, shellfish collected from certain beds which were found to be polluted with sewage were stopped from being sold within the Borough.

The drains at the 35 houses where these 44 cases occurred were tested. Defects were found at 14 houses, and immediate steps were taken to remedy the same.

5 cases of the disease occurred in one house, 3 in a second, and 2 in a third. The remaining cases occurred in separate houses.

The type of sanitary convenience at the infected houses was as follows :—

Water Closets.		Pail
Fresh-water.	Slop-water.	Closets.
25	3	7

Milk was not found to be a vehicle of infection in any series of cases.

The monthly notifications of this disease during 1915 were as follow :—

Jan.	Feb.	Mar.	Apl.	May	June
7	2	16	0	3	3
July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1	1	4	1	5

Total : 44.

58 specimens of blood were submitted by the Medical Practitioners in the Borough for bacteriological examination, with the following results :—

Positive	27
Negative	30
Doubtful	1

TABLE XXVIII.

Typhoid Fever.

Year	Cases Notified.	Deaths.	Mortality per 1,000 Population.
1881	289	68	·65
1882	210	50	·47
1883	442	84	·78
1884	268	67	·61
1885	130	28	·25
1886	105	34	·30
1887	153	41	·36
1888	146	39	·33
1889	111	20	·17
1890	121	37	·31
1891	106	24	·19
1892	79	32	·26
1893	161	27	·22
1894	129	32	·26
1895	119	28	·22
1896	143	33	·26
1897	179	35	·28
1898	228	30	·23
1899	233	40	·31
1900	163	30	·23
1901	131	17	·13
1902	127	23	·17
1903	97	15	·11
1904	111	21	·16
1905	90	15	·11
1906	82	14	·10
1907	61	13	·09
1908	85	14	·10
1909	69	18	·13
1910	46	9	·06
1911	49	8	·06
1912	26	7	·05
1913	31	8	·05
1914	31	7	·05
1915	44	6	·04

ERYSIPELAS.

During 1915, 69 cases of Erysipelas were notified, and no deaths were registered.

PUERPERAL FEVER.

There were 5 notifications of Puerperal Fever received from Medical Practitioners during 1915, as compared with 10 during 1914.

3 of the cases terminated fatally.

MEASLES.

1,082 cases of Measles were reported from the Schools during the year, compared with 863 during 1914 and 392 during 1913.

The following Table gives the number of cases reported and the deaths per month during the year :—

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Cases Reported	32	12	4	10	67	128	102	...	96	229	269	133	1082
Deaths ...	...	...	1	1	2	2	3	5	5	3	14	8	44

DEATHS IN AGE-PERIODS.

0—1	1—2	2—5	5—10	Total.
13	22	7	2	44

The death-rate from Measles during 1915 was 0.34, as compared with 0.14 during 1914.

It will be noticed in Table X. that more deaths occurred from Measles than from any of the other acute infectious diseases.

The disease has caused considerable loss of school attendance during the year, and is more fully discussed in the Annual Report to the Education Committee.

The Infant Departments at the following Schools were closed during the year on account of the prevalence of Measles :—

St. James', Black-a-Moor	Jan. 30 to Feb. 14
Mill Hill Council	May 15 to May 30
Parish Higher Grade	July 2 to July 19
Maudsley Street	Sept. 25 to Oct. 11
Lower Darwen Council	„ 25 to „ 11
Furthergate	Oct. 22 to Nov. 8
St. Joseph's	„ 22 to „ 8
St. Thomas'	„ 22 to „ 8
St. Barnabas'	„ 27 to „ 12
St. Matthew's	„ 27 to „ 12
Audley Range	Nov. 12 to „ 27
St. Alban's	„ 16 to Dec. 1
St. Michael's	„ 16 to „ 1
St. Stephen's	„ 24 to „ 9
Cedar Street	Dec. 2 to „ 17
Bangor Street	„ 2 to „ 17
Accrington Road	„ 11 to „ 26
St. John's	„ 11 to „ 26
St. Peter's R.C.	„ 21 to Jan. 5/16

The following Table shows that the disease rapidly dies down at a School after closure of an Infant Department for 16 days, and tends to prove that this disease is chiefly spread at School and especially among children under 6 years of age. It is greatly to be recommended that, from a point of view of economy and health children be not allowed to attend School until they have attained at least 5 years of age.

Table XXIX.
Shewing the effect of closing the various Infant Departments
on the prevalence of Measles amongst the children.

SCHOOL	Cases occurring during the 16 days before closure.	*Cases occurring during the 16 days of closure.	Cases occurring during the 16 days following the re-opening of the Infant Departments.	REMARKS
St. James', Black-a-Moor, Infants	12	...	...	Whole Department closed.
Mill Hill Council Infants	36	7	...	do.
Parish Higher Grade Infants	16	1	...	do.
Lower Darwen Council Infants	17	4	...	do.
Maudsley Street Infants	16	14	3	do.
Furthergate Infants...	23	3	1	do.
St. Joseph's Infants ...	21	10	1	do.
St. Thomas' Infants...	29	9	...	do.
St. Barnabas' Infants	16	15	...	do.
St. Matthew's Infants	24	2	...	do.
Audley Range Infants	22	6	...	do.
St. Alban's Infants ...	18	2	2	do.
St. Michael's Infants	9	2	...	do.
St. Stephen's Infants	30	44	...	do.
Cedar Street Infants..	14	1	...	do
Bangor Street Infants	36	6	...	do
Accrington Road Infants	5	...	...	do.
St. John's Infants ..	12	3	...	do.
St. Peter's R.C Infants	9	4	...	do.

* Except in the case of St. Stephens' School these figures are not complete : many cases occurring during the period of closure are not reported.

TABLE XXX.

Deaths and Death Rates from Measles.
1871—1915.

Year	Total Deaths	Death Rate	Year	Total Deaths	Death Rate
1871	61	0·8	1893	140	1·1
1872	31	0·3	1894	13	0·01
1873	119	1·4	1895	324	2·5
1874	142	1·7	1896	36	0·2
1875	29	0·3	1897	143	1·0
1876	167	1·9	1898	50	0·38
1877	48	0·5	1899	40	0·29
1878	25	0·2	1900	76	0·55
1879	37	0·3	1901	94	0·72
1880	74	0·7	1902	77	0·59
1881	9	0·08	1903	53	0·40
1882	167	1·5	1904	60	0·45
1883	1	0·009	1905	42	0·32
1884	92	0·8	1906	63	0·48
1885	1	0·009	1907	45	0·34
1886	195	1·7	1908	15	0·11
1887	76	0·6	1909	41	0·30
1888	117	1·0	1910	39	0·29
1889	188	1·6	1911	28	0·21
1890	15	0·1	1912	52	0·38
1891	173	1·4	1913	10	0·07
1892	8	0·06	1914	20	0·14
			1915	44	0·34

WHOOPIING COUGH.

There were 39 deaths from Whooping Cough during 1915, as compared with 9 during 1914 and 7 during 1913.

These 39 deaths occurred in the following age-periods :—

0—1	1—2	2—5	5—10
21	13	4	1

TUBERCULOSIS.

There were 151 deaths from Tuberculosis during 1915, as compared with 156 during 1914.

Of these 151 deaths, 109 were due to Tuberculosis of the Lungs.

The death-rate from all forms of Tuberculosis was 1.18 per 1,000 of the population, and from Pulmonary Tuberculosis 0.85 per 1,000.

During the year 301 notifications of cases of Tuberculosis were received from Medical Practitioners, compared with 272 received during 1914.

Of the 301 notifications received, 213 were cases of Tuberculosis of the Lungs, and 88 were cases of Tuberculosis in other organs of the body.

The following Table gives a Summary of the Notifications received from Institutions during the year :—

INSTITUTION.	Admitted.	Discharged
Tuberculosis Wards, Blackburn Infectious Diseases Hospital	75	79
Meathop Sanatorium, Grange-over-Sands	33	33
Blackburn Union Infirmary	27	11
Crossley Sanatorium, Kingswood	1	...
Dean Head Sanatorium, Horsfuth.....	...	1
Haslingden Union Infirmary .....	...	1
Fairlight Sanatorium, Hastings .....	...	1
Royal National Sanatorium, Bournemouth.....	...	1
Townley Hospital, Farnworth .....	...	1

In several instances a patient has been transferred from one institution to another, and therefore the same case may appear under the heading of more than one institution.

TABLE XXXI.
Deaths from Tuberculosis for Ten Years.

	1906.		1907.		1908.		1909.		1910.		1911.		1912.		1913.		1914.		1915.	
	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate
Tabs Mesenterica ...	34	0.25	36	0.26	28	0.20	23	0.16	22	0.16	13	0.09	15	0.11	21	0.15	10	0.07	16	0.12
Tuberculous Meningitis	24	0.17	36	0.26	16	0.11	22	0.16	15	0.10	13	0.09	8	0.05	12	0.08	12	0.08	14	0.10
Pulmonary Tuberculosis...	124	0.92	133	0.98	148	1.09	136	0.99	110	0.80	119	0.89	109	0.81	88	0.65	124	0.92	109	0.85
Other Forms	6	0.04	9	0.06	10	0.07	9	0.06	7	0.05	8	0.06	10	0.07	16	0.11	10	0.07	12	0.09
Total	202	1.51	222	1.65	217	1.60	199	1.46	166	1.21	164	1.23	142	1.06	137	1.02	156	1.16	151	1.18

TABLE XXXII.

Pulmonary Tuberculosis in Blackburn.

Year.	Deaths.	Death Rate (per 1,000).	
1881	1.90	} 1.720
1882 .....	.....	1.80
1883 .....	.....	1.90
1884 .....	.....	1.70
1885	1.30	} 1.624
1886 .....	.....	1.80
1887 .....	.....	1.50
1888 .....	.....	1.50
1889	187	1.52	} 1.206
1890	214	1.80	
1891	163	1.35	
1892	132	1.09	
1893	134	1.10	} 1.182
1894	148	1.20	
1895	160	1.29	
1896	142	1.14	
1897	149	1.19	} 1.070
1898	154	1.22	
1899	152	1.20	
1900	148	1.16	
1901	150	1.17	} 0.956
1902	163	1.25	
1903	122	0.93	
1904	125	0.94	
1905	142	1.06	} 0.824
1906	124	0.92	
1907	133	0.98	
1908	148	1.09	
1909	136	0.99	} 0.85
1910	110	0.80	
1911	119	0.89	
1912	109	0.81	
1913	88	0.65	} 0.824
1914	124	0.92	
1915	109	0.85	

From the foregoing tables it will be seen that, although no definite improvement can be shown for the last two years, there has been, however, a gradual fall in the Tuberculosis death-rate during the last 30 years, if we consider the rates for 5-year periods.

It has been attempted in Table XXXIII. to give a comprehensive view of the conditions attending the disease in Blackburn. The particulars set forth in this Table were obtained by the four Health Visitors on the investigation of each notified case. The home of each case is visited immediately after notification, the particulars enumerated are obtained and general advice is given as regards cleanliness, ventilation and the adoption of measures to prevent the spread of the disease to others. It is interesting to note that 10 per cent. of the cases of Pulmonary Tuberculosis occurred among children under 14 years of age.

The frequent occurrence of the disease among large families and in households with small accommodation is shown. As was to be expected also, the table confirms the association of Tuberculosis and poverty. Under these circumstances it is very evident that adequate treatment and isolation at home is practically impossible.

A.—Pulmonary Tuberculosis.

{	Males	113
	Females	100

{	Males	88
	Females	94

[illegible]

* 14 of these cases were among lodgers who had only themselves to provide for.

B.—Non-Pulmonary Tuberculosis.

{	Males	36
{	Females	52

{	Males	37
	Females	39

Number of cases investigated during the year.	Age Periods.											Occupations.											No. of family in household				No. in house			No. of rooms					Furnished room	Cleanliness			Ventilation			Income of family at the time of investigation.										Tuberculosis in other members of family		
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Cotton Workers	Other factory hands (not Cotton)	Labourers	Shopkeepers and Assistants	Clerks	At School or under School age	Foundry Workers	Painters	Carters	Coal Miners	Other occupations	Dressmakers and Machinists	Housewives	1 (lodger)	2 to 4	5 to 7	8 and over	2 to 4	5 to 7	8 and over	3	4	5	6		over 6	Good	Fair	Bad	Good	Fair	Bad	Under 20/-	20/- and under 25/-	25/- and under 30/-	30/- and under 35/-	35/- and under 40/-	40/- and under 50/-	50/- and under 60/-	60/- and over	Not ascertained		Living on charity	
MALES 37 cases	7	7	7	8	4	2	1	...	1	...	12	2	20	1	...	2	2	31	30	13	27	31	16	36	15	20	1	...	2	53	18	5	30	39	7	5	14	9	8	4	15	3	8	10	...	6
FEMALES 39 cases.....	4	9	5	4	4	7	4	2	18	1	...	17	2	...	1	2	31	30	13	27	31	16	36	15	20	1	...	2	53	18	5	30	39	7	5	14	9	8	4	15	3	8	10	...	2	

* 2 of these cases were among lodgers who had only themselves to provide for.

METHODS ADOPTED FOR DEALING WITH THE DISEASE.

I.—PREVENTIVE MEASURES.

- (a) General measures of sanitation.
- (b) Home visiting of cases by the Health Visitors and the giving of advice as to the cleanliness and ventilation of the home and as to other precautions necessary to prevent the spread of the disease.
- (c) Isolation of advanced cases in hospital.
- (d) The instruction of patients at the Hospital, Sanatorium, Dispensary and home in the methods of preventing the spread of the disease.
- (e) Disinfection of homes, bedding, &c., after removal or death of the case.
- (f) Special examination at school by the School Medical Inspector of all children living in houses where there are notified cases of Tuberculosis, and the dealing with pre-Tuberculous school children at the Open-Air Classes. (See Annual Report to the Education Committee).
- (g) Precautions taken to ensure as far as possible a non-Tuberculous meat and milk supply. (See elsewhere in this Report.)

2.—CURATIVE MEASURES.

- (a) Institutional treatment in Meathop Sanatorium. (12 beds are reserved by the Corporation of Blackburn.)
- (b) Subsequent supervision of the cases at the Tuberculosis Dispensary.

In the prevention of Tuberculosis the most important items are the sanitation of the home and the mode of life of its inmates; and where these are at fault neither Hospital,

Dispensary nor Sanatorium can avail much in curtailing the ravages of the disease. The so-called campaign which has been instituted in recent years under the National Insurance Act has undoubtedly caused too much stress to be laid on the treatment and attempted cure of the disease in Institutions, and consequently too little attention has been paid by the general public to its prevention in their homes and by their mode of living.

Under the influence of improved sanitary conditions the Tuberculosis death-rate has been gradually falling during the past 30 years, but much more can yet be done in this respect. Stricter cleanliness and a more abundant supply of fresh air are possible in many homes; food can be chosen, prepared and cooked to better advantage and a more healthy mode of life can be adopted.

In such simple measures as these we still have the main protection against Tuberculosis; and probably also more cures take place unsuspectedly in healthy homes, where the favourable surroundings can react on the disease at its early inception and before it has given rise to any definite symptoms, than in the many large Sanatoria which of necessity are only resorted to when the patient has shown some evidence of illness and the disease has obtained a firmer foothold.

The regular visiting by the Health Visitors of all cases of Tuberculosis which are being treated at home enables them to point out the need for cleanliness and ventilation and to do much towards the prevention of the spread of the disease.

As during the preceding three years, a Pavilion at the Fever Hospital, containing 26 beds, has been set aside for advanced cases of the disease. In some instances patients are admitted for short periods in order that they may be trained in the mode of living which is most beneficial for

themselves and in the precautions necessary to prevent the spread of the disease to others. More advanced cases, especially when members of large households, are retained for longer periods, or until death, in order to isolate them and prevent their being a source of danger to others at home.

The 12 beds at Meathop Sanatorium are reserved as far as possible, for early cases of Pulmonary Tuberculosis.

Table XXXV. gives the subsequent history of Blackburn patients treated in the Sanatorium, and it will be seen that of the 146 patients whom it has been possible to follow up, 36.3 per cent. are alive and well, 30.1 per cent. are alive but still suffering from the disease, and that 33.5 per cent. have died.

The need of some system of after care for the patients on their leaving sanatorium was referred to in last year's report, and steps should be taken to deal with the matter as soon as circumstances permit.

TUBERCULOSIS DISPENSARY.

As during previous years, a room in the Offices of the Health Department has been used for the Dispensary, but a special building has been erected in Duke Street, and will be opened after the war.

The number of persons examined at the Dispensary for the first time during the year was as follows :—

	Males.		Females.		Total.
Insured persons	79	...	42	...	121
Non-insured persons	11	...	21	...	32
	—		—		—
	90		63		153

The total number of persons attending the Dispensary for treatment or for observation was 112, and the patients made a total number of 234 attendances.

5 persons were treated with Tuberculin.

TABLE XXXIV.

Treatment of Pulmonary Tuberculosis.—Meathop Sanatorium.

	ADMISSIONS.						DISCHARGES.									
	Age Periods.						Stage of Disease.			N. I. Act.		Number of cases.	Condition of Patients on Discharge.			
													Disease arrested	Condition improved	No improvement	Average stay in Sanatorium
	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	Early	Moderately advanced	Advanced	Insured	Not insured					
Males... (18 cases)	1	10	5	2	11	5	2	17	1	19	10	9	...	123.2 days
Females... (14 cases)	...	1	5	5	3	...	10	4	..	14	0	13	8	5	...	163.8 days

TABLE XXXIV.—Continued.
Fever Hospital (Tuberculosis Wards).

ADMISSIONS.										DISCHARGES.								
Age Periods.						Stage of Disease			N. I. Act.		Condition of Patients on Discharge.							
10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	Early	Moderately advanced	Ad- vanced	Insured	Not insured	Number of cases.	Disease apparently arrested	Improved	No improve- ment	Disease advancing	Died	Transferred to Meathop	Average stay in Hospital
...	5	6	11	15	8	2	12	31	42	3	52	...	29	8	6	6	3	111.7 days
Males (45 cases)																		
1	5	5	10	9	3	4	6	23	22	11	32	...	13	8	5	5	1	122.0 days
Females..... (33 cases)																		

In addition to the above one female was admitted for observation and the case proved not to be one of Pulmonary Tuberculosis.

INFANTILE DIARRHŒA AND ENTERITIS.

The deaths from Diarrhœa and Enteritis of children under two years of age were 51, as compared with 43 during the year 1914.

42 deaths from Diarrhœa occurred amongst children under 12 months of age, and enquiries were made at the homes as to the feeding of the infant, occupation of the mother, means of storing milk and food, and sanitary condition of premises.

The ages of the children at death were as follows :—

Under 1 Month	6
1 Month and under 3 Months	10
3 Months and under 6 Months	15
6 Months and under 9 Months	6
9 Months and under 12 Months	5

The mother was engaged in home duties in 21 instances, and in work away from home in 19. In only 10 instances were the children entirely breast fed. At 30 houses there were fresh-water closets, at 1 house there was a slop-water closet, and at 9 there were pail-closets.

As regards the storing of food, in only 2 instances was food kept in a special pantry, in 28 instances the food was stored on shelves in the scullery, in 7 instances it was kept in the cupboard or on the shelves in the kitchen, and in 3 instances the food was placed anywhere in the room.

In 1 case particulars were unobtainable and 1 child died in the Union Workhouse.

CANCER.

There were 157 deaths from Cancer during the year, as compared with 134 during 1914.

TABLE XXXV.

The subsequent history of Blackburn patients treated at Meathop Sanatorium since 1908.

MALES.

FEMALES.

Condition of disease on discharge	Number of Patients	Average period of treatment	Number of Patients apparently quite well after having been discharged from Sanatorium for								Number of patients alive but still suffering from the disease, having been discharged from Sanatorium for								Deaths, the patients having lived the following number of years after discharge from Sanatorium.								Number of patients of whom no particulars can be obtained	Condition of disease on discharge	Number of Patients	Average period of treatment	Number of patients apparently quite well after having been discharged from Sanatorium for								Number of patients alive but still suffering from the disease, having been discharged from Sanatorium for								Deaths, the patients having lived the following numbers of years after discharge from Sanatorium								Number of patients of whom no particulars can be obtained
			6 years and over	5 years and under 6	4 years and under 5	3 years and under 4	2 years and under 3	1 year and under 2	Less than 1 year	6 years and over	5 years and under 6	4 years and under 5	3 years and under 4	2 years and under 3	1 year and under 2	Less than 1 year	Not ascertained	6 years and over	5 years and under 6	4 years and under 5	3 years and under 4	2 years and under 3	1 year and under 2	Less than 1 year	Not ascertained	6 years and over					5 years and under 6	4 years and under 5	3 years and under 4	2 years and under 3	1 year and under 2	Less than 1 year	Not ascertained																		
Arrested or Quiescent...	48	DAYS 111'4	5	1	5	11	7	1	7	2	1	2	6	Arrested or Quiescent...	16	DAYS 140'8	1	1	5	1	2	1	1	4					
Improved	63	113'7	2	1	3	1	4	1	1	...	2	2	2	4	4	5	1	8	7	8	7	Improved	38	142'5	...	1	1	...	2	...	1	1	1	2	2	3	1	3	3	1	6	2	8				
No improvement	2	145'0	1	1	No improvement ...	4	104'7	1	...	1	2								
Total	113		42							30							28							13	Total	58		11							14							21							12						

In addition to the above :—

- 6 males left at their own request and against the advice of the Medical Superintendent, after an average stay of 21 days.
- 2 males were discharged for disciplinary reasons after an average stay of 21 days.
- 1 male died in the Sanatorium after 92 days' treatment.
- 1 male was discharged after 57 days as not suffering from Pulmonary Tuberculosis.
- 1 male was killed in action in Egypt.

In addition to the above :—

- 1 female died in the Sanatorium after 31 days' treatment.
- 2 females were discharged after an average stay of 31.5 days, as not suffering from Pulmonary Tuberculosis.

The classification of the Certificates of Death from Cancer is as follows :—

Carcinoma	136
Epithelioma	2
Rodent Ulcer	3
Sarcoma	6
Malignant Disease	10

It will be observed in the following Table that the number of deaths from Cancer has been gradually increasing in recent years.

DEATHS FROM CANCER—1889-1915.

Year.	Males.	Females.	Total.
1889	20	32	52
1890	14	24	38
1891	19	34	53
1892	14	38	52
1893	23	37	60
1894	23	34	57
1895	33	48	81
1896	25	56	81
1897	28	44	72
1898	36	58	94
1899	28	52	80
1900	33	65	98
1901	27	64	91
1902	40	51	91
1903	35	57	92
1904	33	74	107
1905	46	67	113
1906	36	72	108
1907	45	68	113
1908	43	65	108
1909	43	64	107
1910	33	94	127
1911	40	73	113

Year.	Males.	Females.	Total.
1912	52	76	128
1913	64	75	139
1914	58	76	134
1915	56	101	157

INFLUENZA, BRONCHITIS, AND PNEUMONIA.

The number of deaths from Bronchitis and Pneumonia was 464, as compared with 438 in 1914 and 412 in 1913. The deaths from Influenza were 32, as compared with 24 during 1914 and 35 during 1913.

DISINFECTION.

860 rooms were sprayed with Formalin at 661 houses, after cases of infectious disease.

567 visits to infected houses were made for the purpose of supplying disinfectants, and 67 typhoid pails were collected and their contents burnt at the Destructor.

The following articles were disinfected by steam :—

963 Beds.
668 Mattresses.
725 Bolsters.
1,131 Pillows.
1,303 Quilts.
1,303 Blankets.
696 Sheets.
432 Suits.
387 Carpets.
307 Rugs.
742 Curtains.
4,749 Sundries.

The following articles were removed to the Destructor and destroyed by consent of the owners :—26 beds, 29 mattresses, 9 bolsters, 13 pillows, 5 quilts, 1 sheet, 1 suit of clothes, 3 carpets, 2 rugs, and 43 sundries.

DISINFECTANTS.

The following quantities of disinfectants have been used by the Health Department during 1915 :—

1. Chloros, 465 gallons.
2. Chloride of Lime, 2 tons 4 cwt.
3. Sanitary Dry Lime, 2,880 7lb. bags.
4. Carbolic Powder, 70 gross.

The quantity of disinfectants used is by no means a criterion of the amount of valuable work performed in their use. As a matter of fact, it is very often much otherwise, and, the more disinfectants are employed, the more insanitary conditions are frequently found to have been perpetuated by their use.

Although, therefore, disinfectants, when used properly, are articles of the utmost value, they may be easily a source of danger when put to improper use.

The chief use of a disinfectant is to destroy infection, namely, the germs of infectious disease. It is well known, however, that disinfectants will destroy, or prevent the formation of, foul-smelling gases which arise from the decomposition of animal and vegetable matter and which are frequently associated with defective sanitary conditions.

Now, if there is a defect which gives rise to a nuisance, the only proper method of dealing with that nuisance is to remedy the defect. But, unfortunately, the nuisance is often mitigated by the use of disinfectants and the real defect allowed to continue.

For instance, a defective gulley will probably give rise to a nuisance the evident part of which, namely, the smell, can be to a certain extent suppressed by the application of a disinfecting or deodorising substance. The defect in the gully, however, still remains, and the real danger from the

defect is in no wise lessened through the evident part having been mitigated by the use of some of these articles. In such a case, therefore, the use of a disinfectant is a direct danger to the public, for by destroying the smell a very useful danger-signal that something is wrong has been done away with.

As a rule, general cleanliness and good ventilation are far more efficacious in preventing the spread of infectious disease than the haphazard use of disinfectants. These should be reserved for special application to known infection, when they must be used with due care and full regard to their limitations. It is useless to expect disinfectants to act as a safeguard in the absence of ordinary sanitary measures.

The following points must be borne in mind in using a disinfectant :—

- (1) The disinfectant chosen must be suitable for the special conditions of the case.
- (2) It must be used in sufficient strength and must be allowed adequate time to act on the infected matter.
- (3) It must be intimately mixed with the matter to be disinfected, and as a rule this can only obtain when the disinfectant is in the liquid form.

“ Disinfecting Powders ” are therefore of little practical use as disinfectants—they act chiefly as deodorisers.

FEVER HOSPITAL.

The Fever Hospital is situated in Park Lee Road on an open site of $10\frac{1}{2}$ acres, at a height of 560 feet above sea-level.

Full particulars appeared in the Annual Report for 1903 respecting cost, buildings, number of beds, &c. The Administrative Block was extended in 1913, at a cost of £2,000.

The following Table gives an analysis of the number of patients admitted to the Fever Hospital during 1915, the number of deaths, and other details.

It will be observed that the average number of beds occupied was 46.6, as compared with 76.9 for the previous year.

The average number of days each patient stayed in Hospital was 32.8.

Table XXXVI.—Fever Hospital.

Notified Disease.	Patients remaining in hospital on January 1st, 1915.			Patients admitted and discharged during 1915.			Patients remaining in hospital on January 1st, 1916.			Analysis of all cases admitted in 1915, whether discharged or not during the year.				Average No. of Beds occupied during 1915.
	Total	Recov-ered.	Died.	Total	Recov-ered.	Died.	Total	Recov-ered.	Died.	Total	Recov-ered.	Died.	Average days in Hospital	
Scarlet Fever ...	66	66	...	324	319	5	36	36	...	360	355	5	39.5	38.9
Enteric Fever...	10	9	1	30	27	3	5	5	...	35	32	3	55.7	5.3
Diphtheria.....	5	5	...	23	20	3	1	1	...	24	21	3	35.6	2.3
Totals	81	80	1	377	366	11	42	42	..	519	508	11	32.8	46.6

SCARLET FEVER.

The total number of cases admitted during the year as Scarlet Fever was 360. Of these, 6 were found not to be suffering from Scarlet Fever, leaving 354 true cases admitted as such.

Of these 6 negative cases—

3 were cases of Measles.

3 had no definite signs of any illness.

One case of Scarlet Fever had Chickenpox on admission, and 1 had Measles.

5 Patients contracted Measles in Hospital.

1 Patient contracted Chickenpox in Hospital.

1 Patient contracted Whooping Cough in Hospital.

5 Deaths occurred, giving a case mortality of 1.3 per cent.

The Convalescent Scarlet Fever Pavilion (26 beds) is still being used for patients suffering from Pulmonary Tuberculosis. Both patients insured under the National Insurance Act and non-insured patients are receiving treatment, and the cost of the insured patients is being borne by the Blackburn Insurance Committee, so far as their restricted funds will allow.

RETURN CASES.

In 12 instances an inmate of the household developed Scarlet Fever within 28 days of the return of a case of the disease from Hospital, giving a percentage of 3.3 return cases.

The average stay in Hospital of the patients who gave rise to the return cases was 38.8 days, and it is evident that the discharge of uncomplicated cases at the end of the 4 weeks has not been a source of danger in this respect.

The following complications and sequelæ occurred amongst the Scarlet Fever patients :—

Rhinitis	36
Otorrhœa	60
Albuminuria	16
Adenitis	14
Adenitis (suppurative)	12
Nephritis	8
Arthritis	1
Septic Finger	4
Erysipelas (face)	1
Paralysis Leg Muscles	1
Septic Toe	1
Septicæmia	1
Pneumonia	1

TYPHOID FEVER.

The total number of cases admitted to the Hospital certified as Typhoid Fever was 35.

1 case was suffering from Pulmonary Tuberculosis and not Enteric Fever. This patient died.

1 case developed Chickenpox.

Among the 34 true cases of Typhoid Fever there were 2 deaths, showing a case mortality of 5.8 per cent.

The following complications and sequelæ occurred :—

Phlebitis	2
Hæmorrhage	2
Pleural Effusion	1

DIPHTHERIA.

24 cases were admitted to the Hospital certified as suffering from Diphtheria.

2 cases admitted as Diphtheria were found not to be suffering from the disease.

Of the 22 true cases, 12 were laryngeal cases.

Tracheotomy was performed on 5 of these 12 cases, and 2 recovered.

Among the 22 cases of Diphtheria there were 3 deaths, showing a case mortality of 13.6 per cent.

FEVER HOSPITAL BACTERIOLOGICAL LABORATORY.

The following work has been carried out at the Fever Hospital Laboratory during the year :—

	Positive.	Negative.	Total.
<i>For the detection of Diphtheria Bacilli—</i>			
Swabs for diagnosis of cases in			
Hospital	9	19	28
Swabs from cases under private			
medical practitioners	8	90	98
Swabs from cases before dis.			
charge from Hospital	17	46	63
<i>For the detection of Tubercle Bacilli—</i>			
Sputum sent by private medical			
practitioners	59	224	283
Sputum from patients under			
treatment in Hospital	42	67	109
Urine	0	1	1
	—	—	—
Total	135	447	582

Section IV.

FACTORIES AND WORKSHOPS.

Full attention has been paid during the year to the administration of The Factory and Workshop Act of 1901.

One of the Inspectors, namely, Inspector Kenyon, devotes his whole time to this work.

Table XXXVIII., on page 96, shows that there were 812 workshops on the register at the end of the year, and they contained 989 rooms, 36 of which were underground.

The register in 1915 showed a decrease of 6 workshops as compared with those existing in 1914.

The approximate number of males employed in these workshops was 1,401, and of females 1,140, as compared with 1,423 males and 1,138 females in 1914.

The visits to factories numbered 212, and to workshops 1,634, as compared with 180 and 1,206 such visits during 1914.

The following Table gives a summary of the visits paid during the year to factories, workshops, &c. :—

Table XXXVII.—Summary of Visits during 1915.

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Factories.....	11	12	10	23	10	20	24	32	19	13	18	20	212
Workshops	65	24	112	159	173	180	114	109	123	252	189	134	1634
Workplaces	2	8	4	3	4	8	49	10	29	21	16	13	167
Outworkers .....	...	13	...	...	...	...	...	12	...	...	6	...	31
Offensive Trades	10	2	9	21	11	20	18	18	17	18	15	20	179
Complaints—Nuisances Investigated.....	2	10	2	2	3	6	9	14	3	2	4	10	67
Food-preparing and Storing Places.....	5	9	2	14	6	11	31	7	7	4	14	9	119
Work in Progress.....	5	9	10	5	11	6	11	21	18	14	6	14	130
Drains Tested .....	...	...	...	...	1	...	...	3	16	...	...	6	26
Total	100	87	149	227	219	251	256	226	232	324	268	226	2565

In Table XXXVIII. are enumerated the defective conditions (123 in number) found to exist in the various premises visited. In Table XXXIX. it will be seen that 99 defects have been remedied during the year. There were thus 52 defective conditions under notice at the end of 1915.

I.—SANITARY CONDITIONS AT WORKSHOPS.

(a) Cleanliness.

Five workshops were found to have dirty floors or windows, and 36 rooms required limewashing at the Inspector's visit.

(b) Air Space.

One room was found to be overcrowded.

(c) Ventilation.

One workroom was found to be deficient in ventilation.

(d) *Drainage of Floors on which Wet Processes are carried on.*

These processes include tripe-boiling, laundry work, &c., and the drainage of the floors has been so satisfactory that there has been no cause for complaint.

SANITARY CONVENIENCES IN WORKSHOPS.

The following is the character of the sanitary conveniences at the various workshops :—

687 Water-Closets.

172 Pail-Closets.

During 1915, notices for the provision of the following requirements were issued to 4 factories and 3 workshops :—

Repairs or reconstruction of sanitary conveniences at factories	20
--------------------------------------------------------------------------	----

Repairs or reconstruction of sanitary conveniences at workshops	3
--------------------------------------------------------------------------	---

SANITARY CONVENIENCES IN FACTORIES.

The following appears in Section 5, Factory and Workshop Act, 1901 :—

“ Where it appears to an Inspector that any act, neglect, or default in relation to any drain, water-closet, earth-closet, privy, ashpit, water supply, nuisance, or other matter in a factory or workshop, is punishable or remediable under the law relating to Public Health, but not under this Act, that Inspector shall give notice in writing of the act, neglect, or default to the District Council in whose district the factory or workshop is situate, and it shall be the duty of the District Council to make such inquiry into the subject of the notice, and take such action thereon as seems to that Council proper for the purpose of enforcing the law, and to inform the Inspector of the proceedings taken in consequence of the notice.”

19 notifications under this Section 5 of the Factory and Workshop Act, 1901, have been received from H.M. Inspectors.

3 of these referred to factories, and 16 to workshops ; the nuisances notified are included in Table XXXVIII.

Due inquiries were made into the matters brought to my notice, and such action taken as was deemed necessary.

The following list shows the matters referred to in the various notices received from H.M. Inspectors in connection with Factories and Workshops :—

	Factories. Workshops.	
No. of rooms requiring ventilation ...	—	1
„ rooms requiring limewashing or cleansing	—	14
„ general repairs	2	—
„ defective flushing apparatus ..	1	—
„ closets to be cleansed and limewashed	—	1
„ sanitary accommodation for sexes not separated	1	1
„ insufficient closet accommoda- tion	1	1

In addition to the above notifications received from H.M. Inspectors, one complaint has been sent to me from another source, and has received attention.

UNDERGROUND ROOMS.

There were 36 underground rooms on the register for 1915, including those used by bakers, as compared with 37 in 1914.

BAKEHOUSES.

There were 206 premises on the Workshop Register as wholesale, retail, and domestic retail bakehouses, or as sugar-boiling establishments.

These trades are carried on in 223 rooms, of which 4 are underground. 2 other underground bakehouses, which had been approved by the Local Authority, were not in use as bakehouses during the year.

112 males and 304 females are employed in the baking industry of this town.

In 21 of these bakehouses both sexes are employed.

17 notices have been issued with regard to insanitary conditions and defects.

UNDERGROUND BAKEHOUSES.

In use at the end of 1903	21
Closed during 1904	9
,, ,, 1905	5
,, ,, 1906	1
,, ,, 1907	0
,, ,, 1908	0
,, ,, 1909	0
,, ,, 1910	0
Untenanted	2
	— 17
	—
In use at the end of 1915	4

WORKPLACES.

The term "Workplace" is not defined in the Act, but it includes places where two or more persons meet regularly to perform some work, such work not being the making, altering, repairing, ornamenting, finishing, or adapting for sale of any article.

In connection with these places, 167 visits have been paid for the purpose of seeing that the provisions of the Factory and Workshop Act, 1901, had been complied with, and 8 defective conditions were dealt with.

FOOD-PREPARING PLACES.

Under this heading are included all pork butchers' shops and other places (not including workshops) in which meat pies, black-puddings, sausages, potted meats, tongues, &c., are prepared for human consumption.

During the year 119 visits have been paid to these places, and the conditions generally have been found to be fairly satisfactory.

RESTAURANTS.

The kitchens of restaurants, hotels, and dining-rooms are included under the heading of "Workplaces."

The inspection of these places has been included in the visits to food-preparing places.

THE RECORD OF OUTWORKERS.

Lists of outworkers were sent in twice during the year by 9 employers, and once during the year by 11 employers.

31 visits were paid to dwellings where outworkers carried on their work. The greater part of this work is, however, carried on in premises which constitute workshops.

TABLE XXXVIII.

Particulars of Registers and Nuisances found (Factories and Workshops).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
	Factories.	Workplaces.	Outwks & C'tacts	Tailors.	Dressmakers.	Milliners.	Cloggers.	Bootmakers.	Curriers & Saddlers	Cabinet Makers	Joiners & Masons	Bakers, Confectioners, and Sugar Rollers.	Basketmakers	Black & White Smiths	Blind and Chairmakers	Brushmakers	Chemists and Photographers	Coopers and Coachbuilders	Cotton Waste Sorters and Upholsters	Scale Makers and Cycle Makers	Hosiery, Underclothes, Shirtmakers	Polishers and Picture Framers.	Painters & Plumbers	Printers and Paper Bag Makers	Wirew krs & Timmers	Wheelwrights	Offensive Trades and Marine Stores	Food Preparers	Miscellaneous	Total.	
No. of Workshops on Register	79	98	52	54	52	10	11	24	206	6	18	5	11	10	5	9	5	5	11	35	4	19	4	19	7	26	812	
No. of Rooms	115	116	54	74	59	12	18	25	223	7	20	5	20	18	5	17	5	5	14	40	5	25	10	34	15	20	989	
No. of Underground Rooms	2	2	..	8	..	..	..	1	4	1	..	..	..	..	1	..	..	..	6	..	..	1	..	..	1	1	36	
Avg'e No. of Males employed	319	4	..	140	117	30	38	63	112	25	63	9	53	18	14	36	10	2	35	74	2	75	45	62	13	42	1401	
Avg. No. of Females employed	119	356	172	..	2	..	..	..	304	8	..	1	1	19	..	5	..	92	..	12	1	..	..	19	3	27	1140	
No. employing both sexes	46	1	..	..	2	..	..	..	21	..	..	..	7	..	..	2	..	2	..	..	1	..	..	8	1	2	93	
No. of rooms badly lighted	51	59	27	10	19	5	10	8	88	3	11	3	11	9	3	9	1	1	14	7	16	3	14	3	27	8	12	435
No. of stoves without outlets...	
No. of rooms badly ventilated	1	..	..	..	..	..	..	..	..	..	..	..	..	..
No. requiring lime-washing or cleansing	4	..	4	1	..	2	1	..	..	..	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	1	3	36	
No. of dirty floors or windows	..	2	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
No. of yards and floor surfaces in bad repair	1	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
No. of drains defective	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No. of Drains blocked	1	..	3	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	1	
No. of insufficient downspouts and defective drainage.....	
No. of defective slop pipes	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	3	
No. of defective gullies & dish stones.	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	
No. of gullies and drains inside places	
No. of accumulations of refuse	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	7

TABLE XXXVIII. — continued.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
No. ash receptacles and excreta pails to be emptied .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
No. without ash receptacles ..	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	5
No. of low chimneys .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of defective soil pipes & urinals..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of general repairs	4	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	9
No. of closets to be replaced and in want of repair	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18
No. of closets badly lighted or ventilated	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
No. of defective flushing apparatus..	1	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
No. of closets cleansed & limewashed	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	2	...	8
No. insufficient closet accommodation	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	3
No. of san. accom. for sexes not separated	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
No. of rooms overcrowded ..	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
No. of floors insufficiently drained..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Illegal occupation of underground bakehouse.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Failure to affix Abstract.....	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of Water Closets .....	...	...	104	...	83	42	42	45	5	10	17	154	5	14	5	11	12	2	10	5	18	9	28	5	16	1	19	6	19	687
No. of Pail Closets .....	...	...	...	9	17	12	20	10	3	2	7	52	...	4	...	...	...	3	1	..	5	2	6	...	4	2	5	1	7	172
No. of Privies .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of Notifications received from H.M. Inspector	3	...	...	3	1	...	1	...	...	...	...	8	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	1	19
Notifications sent to H.M. Inspector	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
No. of notices issued	7	9	...	12	2	...	2	1	...	...	...	17	...	...	...	...	1	...	...	...	...	1	...	...	...	...	15	2	2	71
Total	39	21	...	87	74	359	369	316	63	89	145	1214	55	130	28	107	96	33	89	26	179	81	205	32	154	65	232	60	175	5979

COTTON OPERATIVES' MORTALITY STATISTICS.

The following Tables show the death-rates amongst persons engaged in the Cotton industry of Blackburn, for the year 1915, and also the average rates for the period 1889 to 1915.

In the following Tables the Cotton Operatives have been divided into these four groups :—

1. Weavers.
2. Spinners.
3. Winders, Warpers, &c.
4. Card-room hands.

The general, phthisis, and respiratory (other than phthisis) death-rates among these four groups for the year 1915 are given, and these rates are also compared with the corresponding rates since 1889.

The general death-rates among male and female weavers for the year 1915 are also set forth and compared with the rates for the preceding 9 years. The rates for the year 1905 were calculated on the 1901 Census figures ; those for the years 1906 to 1910 on the mean between the 1901 and 1911 Census figures ; and those for the years 1911 to 1915 on the 1911 Census figures. The retired operatives who were formerly in the Cotton trade are included in the figures.

The following rates have been worked from the 1911 Census figures, including the retired operatives.

TABLE XXXIX.

Nuisances Remedied at Factories and Workshops.

	Factories	Workplaces	Out Workers and Contractors	Tailors	Dressmakers	Milliners	Cloggers	Bootmakers	Curriers and Saddlers.	Cabinet Makers and Carvers	Joiners and Masons	Bakers, Confectioners and Sugar Boilers	Basket Makers	Black and White Smiths	Blind and Chair Makers	Brushmakers	Chemists and Photographers	Coopers and Coach-builders	Cotton Waste Sorters and Upholsters	Scale Makers and Cycle Makers	Hosiery, Underclothers and Shirtmakers	Polishers and Picture Framers	Painters and Plumbers	Printers and Paper Bag Makers	Wireworkers and Tanners.	Wheelwrights	Offensive Trades and Marine Stores	Food Preparers	Miscellaneous	TOTALS
Stoves Connected to Outer Air.....																	1													1
No. of Rooms Ventilated												15																5	1	30
Internal Walls and Ceilings of Rooms Limewashed		1		4	1		2	1				1																1		5
Internal Floors, Windows and Walls of Rooms Cleansed		2		2								2																1		3
Inside Floors and Yards Badly Flagged or Paved, Repaired																												1		6
Choked Drains (opened and cleansed)		1		3								1																1	1	1
Defective Drains Relaid																												1		1
Defective Easing Troughs and Downspouts, Repaired												1																1		1
Defective Sink Waste Pipes (short)																													1	2
Defective Trap Gullies and Dish Stones Replaced												2																		2
Accumulations of Refuse and other Debris Removed		1		1								1																4		7
Gullies and Drains inside places removed																														
Ash Receptacles Provided		2										1																1		4
Low Chimneys Raised																														
Defective Soil-pipes and Urinals Repaired..																														
General Repairs not Detailed.....	1											2											1					5		9
Defective W.C.'s Repaired, Re-placed, or Reconstructed.....	7																									2				9
Water Closets Lighted or Ventilated																														
Defective Connections and Fittings W.C. Flush Pipe to Pan, Repaired	1	1		2																						1				5
Closets Cleansed, Pans Cleansed, Walls and Tops Limewashed				4																		1				1	1		1	8
Additional W.C.'s Provided																												2		2
Separate Sanitary Accommodation Provided for the Sexes																														
Overcrowding Abated					1																									1
Floors Drained.....																														
Illegal Occupation of Underground Bakehouses Rectified																														
Failure to affix Abstract referred to H.M. Inspector.....												2																	1	3
No. of Defects Found, 123 ; Remedied, 99	9	8	...	16	2	...	2	1	...	...	...	28	...	...	...	...	1	...	...	...	...	1	1	...	..	4	21	3	2	99

Table XL.—Deaths.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	22	2	6	...	66
25 to 35.....	26	3	8	2	93
35 to 45.....	19	3	7	5	137
45 to 55	35	4	6	3	244
55 to 65.....	20	10	9	4	326
65 and upwards ...	44	14	4	1	558
Total	166	36	40	15	1424

Death Rates.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	2·1	1·8	2·9	0·0	2·6
25 to 35.....	3·5	5·9	4·3	4·4	3·9
35 to 45.....	4·2	8·8	5·6	16·9	7·3
45 to 55.....	15·5	9·7	7·4	11·0	16·8
55 to 65.....	22·2	49·5	24·2	46·5	37·4
65 and upwards ...	96·9	133·2	33·8	22·2	103·1
All Ages over 15 Years.....	6·4	13·7	6·2	8·9	14·7

Table XLI.—Pulmonary Tuberculosis—Deaths.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	6	...	2	...	21
25 to 35.....	10	...	1	1	22
35 to 45.....	3	1	3	...	29
45 to 55.....	5	...	...	...	17
55 to 65.....	...	...	...	1	8
65 and upwards.....	2	...	...	...	3
Total.....	26	1	6	2	100

Death Rates.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	0·5	0·0	0·9	0·0	0·8
25 to 35.....	1·3	0·0	0·5	2·2	0·9
35 to 45.....	0·6	2·9	2·4	0·0	1·5
45 to 55.....	2·2	0·0	0·0	0·0	1·1
55 to 65.....	0·0	0·0	0·0	11·6	0·9
65 and upwards.....	4·4	0·0	0·0	0·0	0·5
All Ages over 15 years...	1·0	0·3	0·9	1·1	1·0

Table XLII.—Respiratory Diseases other than
Pulmonary Tuberculosis.—Deaths.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Borough.
15 to 25	4	1	...	...	12
25 to 35	6	1	...	1	20
35 to 45	3	...	...	...	17
45 to 55 ...	6	1	3	1	43
55 to 65	8	3	1	1	76
65 and upwards.....	12	3	1	...	132
Total	39	9	5	3	300

Death Rates.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Borough.
15 to 25	0·3	0·9	0·0	0·0	0·4
25 to 35	0·8	1·9	0·0	2·2	0·8
35 to 45	0·6	0·0	0·0	0·0	0·9
45 to 55	2·6	2·4	3·7	3·6	2·9
55 to 65	8·9	14·8	2·6	11·6	8·7
65 and upwards	26·4	28·5	8·4	0·0	24·3
All ages over 15 years ...	1·5	3·4	0·7	1·7	3·1

Table XLIII.—Deaths from all causes from
1889 to 1915.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	926	95	235	56	2769
25 to 35	710	105	261	71	3425
35 to 45.....	722	128	231	95	4877
45 to 55	602	204	215	98	6258
55 to 65.....	637	189	174	76	8061
65 & upwards.....	852	333	194	68	12024
Total	4449	1054	1310	464	37414

Average Death Rates 1889 to 1915.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	3'3	3'3	4'2	3'9	4'0
25 to 35	3'5	7'7	5'2	5'8	5'3
35 to 45.....	6'0	14'0	6'8	11'9	9'6
45 to 55.....	9'8	18'4	9'8	13'3	15'9
55 to 65	26'3	34'6	17'3	32'7	34'3
65 & upwards.....	69'5	117'4	60'8	55'9	82'2
All Ages over 15 Years	6'4	14'9	7'5	10'2	14'3

Table XLIV.
Pulmonary Tuberculosis, 1889 to 1915—Deaths.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	284	25	76	14	750
25 to 35.....	210	33	88	26	800
35 to 45.....	155	31	37	22	884
45 to 55.....	72	23	16	12	547
55 to 65.....	34	4	6	3	261
65 and upwards	5	3	4	...	51
Total	760	119	227	77	3293

Average Death Rates, 1889 to 1915.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	1·0	0·8	1·3	0·9	1·1
25 to 35.....	1·0	2·4	1·7	2·1	1·2
35 to 45.....	1·3	3·4	1·1	2·7	1·7
45 to 55... ..	1·1	2·0	0·7	1·6	1·4
55 to 65.....	1·4	0·7	0·6	1·2	1·1
65 and upwards.....	0·4	1·0	1·2	0·0	0·3
All Ages over 15 years	1·1	1·7	1·3	1·7	1·2

Table XLV.—Respiratory Diseases other than Pulmonary Tuberculosis 1889 to 1915.—Deaths.

Age Periods.	Weavers	Spinners	Winders, Warpers, etc.	Card Room Hands.	Borough
15 to 25.....	91	15	32	5	408
25 to 35.....	97	22	28	10	584
35 to 45.....	123	23	42	19	988
45 to 55	155	49	50	35	1528
55 to 65.....	209	67	49	23	2356
65 and upwards.....	208	86	44	23	3082
Total.....	883	262	245	115	8946

Average Death Rates, 1889 to 1915.

Age Periods.	Weavers	Spinners	Winders, Warpers, etc.	Card Room Hands.	Borough
15 to 25.....	0·3	0·5	0·5	0·3	0·6
25 to 35.....	0·4	1·6	0·5	0·8	0·9
35 to 45.....	1·0	2·5	1·2	2·3	1·9
45 to 55.....	2·5	4·4	2·2	4·8	3·9
55 to 65.....	8·6	12·2	4·9	10·3	10·0
65 and upwards.....	16·9	30·3	13·8	18·9	21·0
All ages over 15 years ...	1·2	3·7	1·4	2·5	3·4

Table XLVI.—Deaths of Male and Female Weavers for the Years 1906—1915.

Age Periods.	1906		1907		1908		1909		1910		1911		1912		1913		1914		1915	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
15 to 25	10	26	7	16	11	17	5	20	16	14	6	25	10	21	13	18	6	23	6	16
25 to 35	6	15	9	11	2	10	6	30	3	23	8	27	7	16	8	14	7	12	8	18
35 to 45	5	16	13	7	13	10	13	16	6	20	12	14	17	13	11	19	12	16	10	9
45 to 55	11	12	16	11	16	9	16	10	11	19	12	16	14	8	18	14	13	13	15	20
55 to 65	10	10	13	5	15	1	17	7	13	17	11	9	9	17	24	11	23	6	14	6
65 and upwards	34	4	26	8	26	9	31	4	32	17	24	3	22	11	45	5	29	4	38	6

Table XLVI.—*continued*.—Death Rates of Male and Female Weavers for the Years 1906--1915.

Age Periods.	1906		1907		1908		1909		1910		1911		1912		1913		1914		1915	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
15 to 25...	3.4	3.5	2.4	2.1	3.7	2.3	1.7	2.7	5.5	1.9	2.0	3.4	3.1	2.9	4.1	2.5	1.5	3.2	1.9	2.2
25 to 35...	3.2	3.4	4.9	2.5	1.0	2.2	3.2	6.8	1.6	5.2	4.3	6.1	3.1	3.1	3.5	2.7	3.1	2.3	3.5	3.5
35 to 45...	3.9	7.5	10.2	3.2	10.2	4.6	10.2	7.5	4.7	9.3	9.4	6.5	10.3	4.6	6.6	6.8	7.2	5.7	6.0	3.2
45 to 55...	15.5	16.9	22.6	15.5	22.6	12.6	22.6	14.0	15.5	26.7	16.9	22.5	13.2	6.6	17.0	11.6	12.3	10.8	14.2	16.6
55 to 65...	23.0	45.6	29.9	22.8	34.5	4.5	39.1	31.9	29.9	77.6	25.3	41.1	16.2	49.5	43.3	32.0	41.5	17.4	25.2	17.4
65 & upds.	184.7	40.0	141.3	80.0	141.3	90.0	168.4	40.0	173.9	170.0	130.4	30.0	71.4	75.3	146.2	34.2	94.1	27.4	123.3	41.0

Section V.

FOOD SUPPLY.

SALE OF FOOD AND DRUGS ACT.

During the year 432 samples, of which 337 were milk, were purchased in Blackburn in the administration of the Food and Drugs Act.

Of the total number of samples taken, 398 were found on analysis to be genuine.

As in former years, informal samples were purchased, and if any of these were found to be adulterated, formal samples were then purchased from the same vendor.

The following Tables are of interest as showing the average composition of milk sold in Blackburn in different months of the year.

Nearly all the milk supplies coming into the Borough from outside districts were sampled, as well as milk from farms within the Borough.

THE PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912.

All samples of milk taken during the year were examined for preservatives, with negative results.

TABLE XLVII.
Work under the Food and Drugs Act.

Articles Purchased.	Number Analysed.	Number Genuine.	Number Adulterated.	Extent or Adulteration.	Action taken
Milk	337	307	30	8% deficient in cream. 5% ,, Slightly deficient in cream. ,, ,, ,, ,, 17% ,, Slightly deficient in cream. 10% of added water. Slightly watered.	Fined £5 10s. Other samples taken and found genuine. Samples taken direct from the cows and found slightly deficient in fat (it was afterwards ascertained that the cows had not been milked dry). Other samples taken and found genuine. Another sample taken and found slightly deficient in fat. Fined £5 14s. Another sample taken and found genuine. Fined £1 17s. 6d. Other samples taken and found genuine.
Carried forward	337	307	30		

Food and Drugs Act—*Contd.*

Articles Purchased.	Number Analysed.	Number Genuine.	Number Adulterated.	Extent of Adulteration.	Action taken.
Brought forw'rd Milk.....	337	307	30	Slightly deficient in cream.	Other samples taken and found genuine.
				4% of added water.	Fined £1 5s.
				Very Slightly watered.	Other samples taken and found genuine.
				29% deficient in cream.	Fined £5 5s.
				Slightly deficient in cream.	Another sample taken and found deficient in fat.
				„ „	Other samples taken and found genuine.
				7% „	Fined 6/-.
				Slightly deficient in cream.	Other samples taken and found genuine.
				Slightly watered.	Do.
				Very slightly deficient in cream.	Do.
				7% deficient in cream.	Fined £1.
Carried forward	337	307	30		

Food and Drugs Act—*Contd.*

Articles Purchased.	Number Analysed.	Number Genuine.	Number Adulterated.	Extent of Adulteration.	Action taken.
Brought forward	337	307	30	<p>Slightly deficient in cream.</p> <p>Very deficient in cream.</p> <p>12% ,,</p> <p>10% ,,</p> <p>Slightly deficient in cream.</p> <p>Very ,,</p> <p>3% of added water.</p> <p>17% deficient in cream.</p> <p>9% ,,</p> <p>Very slightly deficient in cream.</p>	<p>Another sample taken and found considerably deficient in fat</p> <p>Other samples taken and found genuine.</p> <p>Fined £1.</p> <p>Fined £2.</p> <p>Other samples taken and found genuine.</p> <p>do.</p> <p>Fined £5.</p> <p>Fined £2.</p> <p>Fined £1.</p> <p>Another sample purchased and found slightly deficient in fat.</p>
Margarine	30	30			
Butter	14	14			
Malt Vinegar	14	13	1		
Ground Ginger	5	5			
Carried forward	400	369	31		

Food and Drugs Act—*Contd.*

Articles Purchased.	Number Analysed.	Number Examined.	Number Adulterated.	Extent of Adulteration.	Action taken.
Brought forward	400	369	31		
Baking Powder	8	8			
Arrowroot..	4	4			
Lard	7	7			
Cream of Tartar	2	2			
Coffee	3	3			
Jam	8	5	1	Contained 1 gr. of Salicylic Acid per lb.	Letter from M. O. H.
			1	Contained 1 gr. of Salicylic Acid and 6 gr. of Borates, calculated as Boracic Acid per lb.	
			1	Contained 0.6 gr. of Salicylic Acid per lb.	
Total...	432	398	34		

104 samples of Milk were purchased from farmers outside of the Borough for bacteriological examination.

TABLE XLVIII.

Average Amount of Fat and Non-Fatty Solids in the
Samples of Milk taken during 1915.

MONTH.	Number of Samples.	Average percentage of Fat.	Average percentage of Solids not Fat.
January	57	3·51	8·94
February	37	3·59	8·88
March	31	3·63	8·95
April	15	3·40	8·80
May	35	3·71	9·02
June	35	3·43	8·97
July	19	3·53	9·06
August	Laboratory closed.		
September	27	3·75	9·12
October	28	3·76	9·13
November	31	3·74	9·05
December	16	3·42	9·04
Total	331	3·58	8·99

It will be seen that the average percentage of fat in the samples obtained during the year was well above the 3% minimum fixed by the Board of Agriculture.

Six samples of skimmed milk are not included in the above table.

Table XLVIII.—*Continued.*MILK SAMPLES BELOW THE MINIMUM FIXED BY THE
BOARD OF AGRICULTURE.

Month.	No.	Amount of fat %	Amount of other solids %	Action taken.
Jan.	8	2.74	9.09	Fined £5 10s. 0d.
		2.84	8.68	Other samples taken and found genuine.
		*2.91	9.29	Samples taken direct from the cows and found slightly deficient in cream (afterwards ascertained that cows had not been milked dry).
		2.90	8.85	Other samples taken and found genuine.
		*2.92	9.23	Another sample taken and found slightly deficient in fat.
		2.48	8.83	Fined £5 14s. 0d.
		*2.92	9.23	Another sample taken and found genuine.
		2.85	7.61	Fined £1 17s. 6d.
Feb.	1	2.90	8.35	Other samples taken and found genuine.
March	2	2.90	9.20	" " " " " "
		4.04	8.01	
April	3	3.40	8.35	Other samples taken and found genuine.
		2.12	9.26	Fined £5 5s. 0d.
		2.87	8.73	Another sample taken and found deficient in fat.
May	5	2.95	8.71	Other samples taken and found genuine.
		2.79	8.85	Fined 6s. 0d.
		2.91	9.30	Other samples taken and found genuine.
		3.12	8.20	" " " " " "
		2.92	9.13	" " " " " "
June	4	†2.79	8.95	Fined £1.
		*2.90	9.10	Another sample taken and found considerably deficient in cream.
		2.95	8.65	Other samples taken and found genuine.
		*2.64	8.91	Fined £1.
July	3	†2.68	8.66	Fined £2.
		2.90	8.55	Other samples taken and found genuine.
		2.92	8.88	" " " " " "
Aug. & Sept.	—	—	—	—
Oct.	1	†3.36	8.19	Fined £5.
Nov.	1	2.47	9.08	Fined £2.
Dec.	2	2.73	9.07	Fined £1.
		2.95	8.50	Another sample purchased and found slightly deficient in fat.

* All these samples from one farmer.

† All these samples from another farmer.

Total Fines £31 17s. 6d.

THE MILK SUPPLY.

No article of food takes so important a place in our dietary, especially during the early years of life, as milk; and yet none under present conditions is a more possible source of disease. The germs of Tuberculosis, Infantile Diarrhœa, Scarlet and Typhoid Fevers may all be carried in milk, which at the same time forms an excellent medium wherein they can grow and multiply.

No article of food, therefore, requires greater care in its collection, distribution and storage; but, unfortunately, it is very difficult to alter the practice of past generations and induce those concerned in the milk business to appreciate the need for those special precautions which modern science has shown to be necessary.

The Dairies, Cowsheds and Milkshops Orders, 1885-1899, gave Local Authorities a certain amount of control over the sanitary conditions of the cowsheds within their own respective districts, and a few progressive authorities, including Blackburn, have obtained special powers in local Acts of Parliament to deal with tuberculous milk supplied within their districts whether coming from farms within or without their districts.

The Tuberculosis Order, 1913, which came into force on May 1st of that year, required the notification of any cow having a tuberculous udder or an udder which is indurated or otherwise diseased, and of any bovine animal which is or appears to be suffering from tuberculosis with emaciation. The Order also enjoined the inspection of the cattle on the farm in question by a Veterinary Officer and the slaughter of any diseased animal, compensation being paid to the owner according to the agreed value of the animal and the stage of the disease. This Order was replaced in May, 1914, by the Tuberculosis Order, 1914, the latter Order simplifying the valuation for compensation and extending the notification to cattle showing clinical signs of the disease. The 1914

Order was, however, suspended in August, 1914, at the onset of the war.

By the frequent systematic inspection of the dairy cattle by the Veterinary Inspector, during the first half of 1915, a close supervision as regards Tuberculosis was exercised over the milk supplied from farms within this Borough, but a higher standard of cleanliness as regards shippens, cows, and milkers, and greater attention on the part of farmers to abnormal udder conditions, were found to be greatly needed.

About the middle of the year, Mr. Burndred, Veterinary Inspector, joined the Army Veterinary Corps, and the systematic inspection of the dairy farms could not be continued. Moreover, the suspension of the Tuberculosis Orders in 1914 prevented the continuation of the important work of attempting to eradicate Tuberculosis from the dairy cattle in the Borough which had been carried out during the previous year. During the year 1915, therefore, the powers which had been obtained under a local Act in 1901 had to be resorted to to deal with tuberculous milk supplied to the Borough. Under these powers a dairy farmer can be required to cease selling in or sending to the Borough milk from any cow suffering from tuberculosis of the udder, but there is no provision made for the slaughter of the diseased animal which can be sent away to another district without the local authority being able to trace its destination. Hence any attempt towards the eradication of the disease itself has had to be suspended.

Samples are taken from the various milk supplies of the Borough and examined for tubercle bacilli, and if milk is found to be infected with these germs the farm is visited by the Veterinary Inspector and the cattle examined. If any cow is found to be suffering from tuberculosis of the udder the farmer is required to isolate the cow from the rest of the herd and forbidden to supply the milk from the diseased cow to the Borough for human consumption.

The withdrawal of the Milk and Dairies Act, 1914, has also prevented any effective action being taken towards obtaining a purer milk supply.

There is no doubt that under present conditions milk is contaminated at its collection in the shippon, during its distribution in the streets and on its storage in the home.

104 samples were collected from the milk supplied to the Borough and examined for tubercle bacilli by the inoculation test at the Public Health Laboratory, Manchester. Tubercle Bacilli were found to be present in 5 of the samples.

5 special samples were also taken on various farms from special cows in order to decide as to the nature of abnormal udder conditions, tubercle bacilli being found in 4 of the 5 samples.

It is generally held that fresh, untreated milk, provided it is free from harmful germs, has definite advantages over sterilized milk, especially as a food for infants and young children, and it is therefore most essential that milk is so safeguarded from dirt and disease germs that it can be given to children with safety unsterilized. Under present conditions, however, it is far the safer course to boil all milk that is given to children.

The approximate number of cows housed within the Borough is 1,300.

The approximate number of cows supplying milk to the Borough from farms situated in outside districts is 3,750.

During the year 96 visits were paid to farms by the Veterinary Inspector, and 1,952 examinations of cows were made.

	Farms.	Cows.
Within the Borough	93 ...	1,861
Outside the Borough	7 ...	162
	<hr/>	<hr/>
Totals	100	2,023

4 cows were found suffering from Tuberculosis of the Udder, 3 being on 3 farms outside the Borough, and 1 on 1 farm within the Borough.

MEAT INSPECTION.

Meat Inspection is carried out by the Veterinary Inspector, Mr. Burndred, M.R.C.V.S., who is the Chief Meat Inspector, and by the Assistant Meat Inspector, Mr. Goodman.

During the latter part of the year this work has been carried out entirely by Mr. Goodman, owing to Mr. Burndred's absence.

The total number of carcasses destroyed shows a decrease of 37 carcasses when compared with the number destroyed during 1914.

The following are the figures relating to condemned carcasses during the last five years :—

	1911.	1912.	1913.	1914.	1915.
Beef	72 ...	66 ...	75 ...	60 ...	38
Mutton ...	100½ ...	77 ...	61 ...	56 ...	55
Veal	64 ...	64 ...	51 ...	74 ...	61
Pork	32 ...	38 ...	21 ...	29 ...	28
Goats	1 ...	0 ...	0 ...	0 ...	0

A total number of 14,973 beasts, calves and pigs were slaughtered during 1915, of which 296 were tuberculous, or a percentage of 1.9.

Similar percentages since 1903 have been :—

1903	5.1
1904	6.0

1905	5.8
1906	4.8
1907	4.3
1908	3.2
1909	2.7
1910	2.6
1911	2.0
1912	3.0
1913	2.3
1914	2.3

There has thus been for the most part a progressive diminution in the amount of Tuberculosis amongst the animals slaughtered at the Blackburn Abattoir, but this does not necessarily indicate a general diminution of the disease in the country.

Tuberculosis was not present in any sheep out of a total number of 44,507 sheep slaughtered.

Of the above-named 296 tuberculous carcasses, 28, or 9.4 per cent., were totally rejected; 123, or 41.5 per cent., were cows, and 10 of these, or 8.1 per cent., were rejected.

The percentages of tuberculous carcasses rejected during recent years are as follow :—

1908	13.8
1909	17.9
1910	16.4
1911	18.4
1912	22.4
1913	17.9
1914	15.5
1915	8.1

288 of the 296 tuberculous animals were affected with Tuberculosis of the Lungs.

In Tables LII. and LIII. it will be seen that of the 2,996 cows slaughtered at the Abattoir, 14 had tuberculous udders, and that 6 of these were supplying milk at the time of slaughter. 3 of the 14 cows with tuberculous udders were brought to the Abattoir for slaughter at the request of the Veterinary Inspector owing to their suffering from tuberculosis. The remaining 11, or 0.3 per cent., were found among carcasses which were being slaughtered in preparation for food.

Similar percentages since 1908 have been as follow :—

1908	.....	0.06
1909	.....	0.7
1910	.....	0.4
1911	.....	0.5
1912	.....	0.8
1913	.....	0.7
1914	.....	0.2

No private slaughter-house was closed during the year : there are now 10 private slaughter-houses in Blackburn.

During 1915, 1,588 diseased carcasses were examined at the Public Abattoir and Private Slaughter-houses in the Borough, 182 of which were rejected and destroyed as unfit for human food. Compared with last year, this return shows a decrease of 37 diseased carcasses.

During the year, 8,092lbs. of unsound meat, 281 rabbits, and a large quantity of fish were also destroyed. Compared with last year, this return shows a decrease of 1,944lbs. of meat and an increase of 37 rabbits.

The total weight of the rejected carcasses, organs, meat, &c. (excluding fish) destroyed during the year was 32 tons 3 cwt.

The following Tables refer to the number of animals slaughtered at the Abattoir, the amount of meat brought to the Abattoir, the number of tuberculous carcasses and udders examined, the number of carcasses destroyed, and numerous other particulars relating to the inspection of meat and dairy cattle.

The number of diseased animals is greatly augmented by the presence of Distoma in the Liver of Cattle and Sheep, which necessitates the rejection of that organ.

TABLE XLIX.

Number of Animals Slaughtered at the
Public Abattoir.

1915.	Beasts.	Sheep.	Calves.	Pigs.	Goats.
January	742	3591	66	562	...
February	657	3244	108	620	...
March	680	3102	125	558	...
April	799	3711	263	407	...
May	516	2926	83	300	...
June	422	3547	59	231	...
July	567	4966	44	351	...
August	451	3765	47	318	...
September	622	4610	174	310	...
October	590	3524	203	534	...
November	670	3508	207	540	...
December	751	4013	208	1194	...
Totals	7467	44507	1587	5925	...

TABLE L.

Number of Carcasses and Portions of Carcasses
Brought to the Abattoir.

1915.	CARCASSES.			BEEF.		
	Beef.	Mutton.	Pork.	Hind Quarters.	Buttocks	Clods.
January .....	...	...	...	...	...	...
February ...	...	...	120	...	...	...
March .....	...	...	70	...	...	...
April	1	6	80	...	...	...
May .....	...	...	60	...	...	...
June .....	...	...	25	...	...	...
July .....	...	...	20	...	...	...
August .....	...	...	20	...	...	...
September	2	4	50	...	...	...
October ...	6	...	40	...	...	...
November	...	...	50	...	...	...
December...	2	...	176	...	...	...
Totals	11	10	711	...	...	...

Table LI.—Tuberculous Carcasses Examined and Rejected.

1915.	Cows.		Heifers.		Bulls.		Bullocks.		Calves.		Sheep.		Pigs.		Totals.	
	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected
January	8	...	1	...	...	...	...	...	...	...	...	...	18	2	27	2
February	8	...	3	...	2	...	...	...	...	...	...	...	2	...	15	...
March	13	2	...	...	1	1	1	...	...	...	...	...	23	1	38	4
April	19	2	...	...	...	...	1	...	...	...	...	...	9	...	29	2
May	15	3	2	...	2	1	1	...	...	...	...	...	21	2	41	5
June	7	1	...	...	2	...	1	...	1	...	...	...	10	2	21	4
July	7	1	2	1	...	...	...	...	...	...	...	...	12	1	21	3
August	6	...	...	...	...	...	1	...	...	...	...	...	10	1	17	1
September	10	...	2	...	1	...	...	...	...	...	...	...	9	...	22	...
October	8	1	2	...	...	...	...	...	...	...	...	...	11	1	21	2
November	14	...	2	...	...	...	...	...	1	...	...	...	6	1	23	2
December	8	1	2	...	1	...	1	...	...	...	...	...	9	2	21	3
Totals	123	10	16	1	9	2	6	...	2	2	...	...	140	13	296	28

Table LII.—Tuberculous Cows Exhibiting Tuberculosis of the Mammary Glands.

1915	No. of Cow	Age	Where from	EXTENT OF THE TUBERCULOUS PROCESS.		Was she giving milk on the day of slaughter?	Was milk from the farm sold in Blackburn?	Result of examination of the carcass.
				Generalized.	Localized.			
							Udder.	
Feb. 11	1	Aged	Salford	No	Yes	No	No	Passed
Mar. 17	2	5 years	Blackburn	Yes	No	Yes	Yes	Rejected
" 23	3	4 years	Pleasington	Yes	No	Yes	Yes	Rejected
April 12	4	4 years	Clayton-le-Dale	Yes	No			
" 13	5	Aged	Salford	No	Yes	Yes	No	Rejected
" 16	6	Aged	Pleasington	No	Yes		No	Passed
May 11	7	Aged	Aberdeen	No	Yes	No	No	Passed
" 12	8	4 years	Clayton-le-Dale	No	Yes	Yes	No	Passed
" 27	9	4 years	Blackburn	Yes	No	No	No	Passed
July 22	10	Aged	Salford	Yes	No	Yes	Yes	Rejected
" 28	11	Aged	Birkenhead	No	Yes	No	No	Rejected
Dec. 1	12	5 years	Ireland	No	Yes	Yes	No	Passed
" 6	13	Aged	Birkenhead	Yes	No	No	No	Passed
" 29	14	Aged	Annan	No	Yes	No	No	Rejected
								Passed

Table LIII.—Tuberculosis in the Animals Slaughtered during the twelve months ending 31st December, 1915.

EXTENT OF THE TUBERCULOUS PROCESS															
Kind of Animal.	Number Slaughtered.	Of which were Tuberculous	THORAX				ABDOMEN.							Testicles	Udders
			Lungs	Heart and Pericardium	Serous Membranes	Livers	Stomachs	Spleens	Kidneys	Intestines	Uteri	Serous Membranes			
Cows	2996	123	118	16	76	57	25	15	10	14	...	28	...	14	
Heifers	564	16	16	3	14	6	2	1	1	...	...	3	...	...
Bulls	1379	9	8	2	5	2	2	2	2	...	...	2	...	...
Bullocks	2528	6	6	...	3	2	...	...	...	...	...	...	...	...
Calves	1587	2	2	...	1	1	...	...	1	...	...	1	...	...
Sheep	44507	...	...	...	..	...	...	...	...	...	...	...	...	...
Pigs	5925	140	138	1	7	136	13	13	11	...	...	...	3	...
Goats .....	...	...	...	...	..	...	...	...	...	..	...	...	...	...
Totals.....	59486	296	288	22	106	204	42	31	25	14	...	34	3	...	14

TABLE LIV.

Diseased Carcases Examined, Rejected and Destroyed
for Diseases, Etc., other than Tuberculosis.

BEEF.	MUTTON.	VEAL.	PORK.
2 Anthrax	3 Ascites	29 Immature	7 Asphyxia
7 Asphyxia	10 Asphyxia	5 Joint-Ill	1 Pyœmia
5 Staggers	7 Emaciation	3 Jaundice	2 Arthritis
4 Septicæmia	6 Ill bled	10 Unmarketable	1 Nephritis
1 Septic Pneumonia	3 Jaundice	1 Pyrexia	1 Icterus
1 Septic Metritis	2 Parturition	1 Pyœmia	1 Congested and Ill Bled
1 Unmarketable	4 Unmarketable	1 Navel Ill	1 Peritonitis
2 Extensively Bruised	10 Anasarca	1 White Scour	1 Enteritis
1 Black Quarter	1 Pyœmia	2 Congestion of Lungs	
1 Emaciation	1 Extensively Bruised	4 Congested and Ill Bled	
	3 Congestion of Lungs	2 Conditions incidental to Overfeeding	
	1 Arthritis		
	1 Nephritis		
	3 Parasitic Disease of Lungs and Liver		
Totals 25	55	59	15

DISEASED ORGANS, &c., REJECTED AND DESTROYED.

1915	Heads.	Sets of Lungs.	Hearts.	Diaphragms.	Livers.	Stomachs	Spleens	Kidneys	Udders.	Intestines	Testicles.	Bones.
For Tuberculosis ...	189	265	9	100	181	14	3	...	13	5	...	2
For Diseases other than Tuberculosis	7	85	1	...	875	7	...	6	24	11	...	...
Totals	196	350	10	100	1056	21	3	6	37	16	...	2

DISEASED, BRUISED, PUTRID AND UNMARKETABLE MEAT
REJECTED AND DESTROYED APART FROM WHOLE CARCASSES.

1915.	Beef, Mutton, Pork and Veal.					lbs.
January	80
February	840
March	1210
April	810
May	1205
June	430
July	254
August	393
September	530
October	800
November	1040
December	500
Total	8,092

FISH EXAMINED, REJECTED AND DESTROYED.

1915	Fish.								
	Boxes	Barrels	Bags	Kits	Mussels	Cockles	Pots of Shrimps	Lbs. of Fish	Tins of Prawns
Totals	49½	2	10¾	...	...	...	24	...	1

RABBITS, POULTRY, TINNED FOODS, FRUITS, ETC.,
EXAMINED, REJECTED AND DESTROYED.

Rabbits	Fowls	Tins of Sweet-bread	Bags of Tripe	Pieces of Pork
281	12	1	3	91

DESTRUCTION OF FRUIT, ETC.

22 cwt. of Plums
 6½ cwt. of Pears
 23 lbs. of Cherries
 1 wagon of Potatoes
 2½ cases of Eggs

NUMBER OF ANIMALS INSPECTED IN PRIVATE SLAUGHTER
HOUSES.

Beasts	Sheep	Calves	Pigs
2392	14209	457	17

WEIGHT OF REJECTED CARCASSES, ORGANS, MEAT, ETC.,
FORWARDED FOR DESTRUCTION DURING THE YEAR FROM
THE ABATTOIR TO AUDLEY DESTRUCTOR.

1915.	Tons.	Cwts.	Qrs.	Lbs.
January	2	9	0	0
February	2	17	2	0
March	4	1	1	0
April	3	17	0	0
May	3	9	0	0
June	1	12	2	0
July	2	9	0	0
August	1	12	2	0
September	1	9	2	0
October	3	4	1	0
November	1	9	0	0
December	3	12	2	0
	—	—	—	—
Total	37	3	0	0

NUMBER OF VISITS, 1915.

Butchers' Shops, &c.	3,267
Private Slaughterhouses	1,155
Meat Market	300
Fish Market	315
Railway Station	150
	—
Total	5,187

CONTAGIOUS DISEASES OF ANIMALS ACTS AND ORDERS MADE THEREUNDER.

ANTHRAX.

One case of this disease occurred during the year. The beast died on a farm outside the Borough, and the carcase was brought to the special slaughter-house at the Abattoir, where the disease was detected.

The following figures show the cases of Anthrax discovered and reported in Blackburn during the last 10 years :—

Years.	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Blackburn Cases	2	3	0	0	0	1	0	0	1	0
Outside Cases (Introduced)	3	9	0	5	2	1	1	2	0	1
Totals	5	12	0	5	2	2	1	2	1	1

GLANDERS AND FARCY.

No cases occurred in the Borough during the year.

SHEEP DIPPING.

59 sheep were dipped during the year, in accordance with the Sheep Dipping Order.

FOOT AND MOUTH DISEASE.

No cases occurred in the Borough during the year.

SWINE FEVER.

No cases occurred in the Borough during the year.

PARASITIC MANGE.

3 cases of this disease were discovered. The animals were isolated until cured.

CATTLE MARKET.

The Cattle Market has been regularly cleansed and disinfected in accordance with the provisions of the Markets and Sales Order of 1910, after each of the two markets held weekly.

Approximate number of animals exhibited for sale in the Cattle and Pig Markets :—

Year.	Cattle.	Horses.	Sheep.	Calves.
1915	5939	... 29	263	628

The figures for the 7 preceding years are :—

Year.	Cattle.	Horses.	Sheep.	Pigs.
1914	6314	29	420	36
1913	6174	97	358	42
1912	4724	191	399	11
1911	7476	191	893	40
1910	7697	151	544	18
1909	7550	150	1851	39
1908	8010	171	2227	40

THE DESTRUCTIVE INSECTS AND PESTS ACTS 1877 AND 1907,
AND THE ORDERS OF THE BOARD OF AGRICULTURE AND
FISHERIES OF 1912 AND 1914 AS REGARDS THE WART
DISEASE AND THE CORKY SCAB DISEASE OF POTATOES.

The following work was carried out in this connection.

Descriptive and illustrative posters of the Wart and Corky Scab Disease of Potatoes have been posted in different parts of the Borough, drawing the attention of Potato Growers and the public generally to the signs and dangers of these Diseases.

There are 56 Potato Growers within the Borough, and each garden has been inspected before and after planting. Pamphlets have been distributed to growers in connection with these diseases.

No premises were found infected.

AMERICAN GOOSEBERRY MILDEW (FRUIT) ORDER, 1912.

Pamphlets *re* the above Disease were distributed among the Fruiterers on the Market and Greengrocers within the Borough. One case of diseased gooseberries was discovered. The gooseberries were destroyed and the baskets disinfected.

Section VI.

WATER SUPPLY.

Blackburn obtains its water supply from the moorlands of the Brennand and Whitendale Valleys, about 20 miles from the Borough.

ANALYSIS OF WATER.

I am indebted to Dr. R. H. Pickard for the following results of analyses :—

TABLE LV.

Results of Analysis of Blackburn Water.

Samples drawn at	Tech. School	Tech. School	Tech. School	Tech. School
Date	2/3/15	18/5/15	5/11/15	7/12/15
Total Solids in Solution	5.76	5.80	7.00	6.36
Including Mineral Matter	3.36	3.56	4.36	4.44
Chlorides expressed as Chlorine	1.00	1.05	1.00	1.00
Saline Ammonia	0.0016	0.0015	0.0014	0.0026
Organic Ammonia	0.0064	0.0069	0.010	0.0096
Nitrogen as Nitrites	Nil	Nil	Nil	Nil
Ditto as Nitrates	0.017	0.014	0.023	0.0168
Total Hardness	1.72	1.72	1.69	1.82
Temporary Hardness ...	0.12	0.12	0.26	0.26

All results are in parts per 100,000.

TABLE LVI.
Consumption of Water for the year 1915.

MONTH.	Fish Moor Reservoir.	Audley Reservoir	Guide Reservoir.	Bowland Works.	Total.
January	72,470,000	13,770,000	9,564,000	10,058,000	105,862,000
February	67,720,000	13,070,000	10,795,000	8,622,000	100,207,000
March.....	77,650,000	12,170,000	13,648,000	8,177,000	111,645,000
April.....	73,820,000	10,060,000	9,870,000	9,644,000	103,394,000
May.....	79,650,000	11,500,000	10,650,000	10,348,000	112,148,000
June.....	85,620,000	12,610,000	9,508,000	12,809,000	120,547,000
July.....	86,710,000	9,760,000	9,592,000	13,026,000	119,088,000
August	77,700,000	8,750,000	8,577,000	14,125,000	109,152,000
September...	79,910,000	10,010,000	9,792,000	12,535,000	112,247,000
October.....	81,490,000	11,900,000	10,436,000	12,211,000	116,037,000
November...	74,790,000	11,000,000	10,086,000	10,540,000	106,416,000
December....	81,460,000	12,360,000	9,402,000	8,386,000	111,608,000
Total ...	938,990,000	136,960,000	121,920,000	130,481,000	1,328,351,000

Analysis of Water Consumption.

	Business by Meter.	Miscellaneous Business, Stables, Watering Streets, etc.	Domestic and Waste.	Total.
Annual Consumption.	439,481,500	160,143,750	728,725,750	1,328,351,000
Average Daily Consumption.	1,204,058	438,750	1,996,509	3,639,317
Daily Consumption per Head.	8.91	3.25	14.79	26.95

Consumption of Water from 1898.

Year.	Quantity.	Year.	Quantity.
1898	1,222,664,000	1907	1,231,775,000
1899	1,350,864,000	1908	1,283,057,000
1900	1,253,964,000	1909	1,281,101,000
1901	1,121,287,000	1910	1,282,860,000
1902	1,172,240,000	1911	1,308,778,000
1903	1,216,475,000	1912	1,310,994,000
1904	1,201,611,000	1913	1,389,956,000
1905	1,218,226,000	1914	1,376,122,000
1906	1,240,443,000	1915	1,328,351,000

Section VII.

GENERAL SANITARY WORK.

HOUSE DRAINAGE.

One of the Inspectors, namely, Inspector Lees, devotes his whole time to this work, as it is found that house drains require special and continuous attention throughout the town.

During the year, 203 drains have been inspected, necessitating 402 applications of the smoke test and 331 of the water test.

In 127 instances drains were found defective at these inspections, and there were also 51 defective drains remaining over from last year's inspections to be dealt with.

In 151 instances the defects in the drains have been remedied, and thus in 27 cases the work for remedying the defective drainage had not been completed at the end of the year.

During the inspection of and testing the drains, 1,160 visits were made.

The following statement shows in detail the drainage work which has been carried out during the year 1915 :—

No. of Drains inspected	203
„ „ tested on account of Typhoid Fever..	33
„ „ tested on account of Diphtheria ...	37
„ „ tested owing to complaints	49

No. of Drains tested at the request of owners or new tenants	36
„ „ tested owing to other causes	48
„ Letters from the Medical Officer of Health..	86
„ Preliminary Notices served	11
„ Legal Notices served	1
„ Cases in which work was carried out on verbal arrangement	20
„ Visits to work in progress	1160
„ Drains tested (a) smoke	402
„ „ (b) water	331
„ Drains examined by breaking down	124
„ „ tested for leakage with coloured solution	181
„ „ found defective	127
„ „ found not defective	76
„ „ re-laid throughout and stood the water-test	116
„ „ partly re-laid and stood the water- test (short lengths)	15
„ „ partly re-laid and stood the smoke test (short lengths)	20
„ instances of defective drains not re-laid at the end of December, 1915	27
„ Drains opened and cleansed (not re-laid) ...	2
„ Defective gullies replaced	176
„ New lip-dishstones provided	176
„ Inspection Chambers provided	27
„ Slop-water closet drains opened and cleansed	3
„ Down-spouts repaired	58
„ Soil-pipes replaced or repaired	4
„ Surface of yards flagged after drains re-laid..	16

No. of Surface of yards repaired after drains re-laid	
„ Pail-closets converted to W.C.'s	11
„ Sink waste-pipes repaired	35
„ Useless drains removed from cellar premises	1
„ Slop-water closets converted to pedestal wash-down closets	5
„ Privies converted to pedestal wash-down closets	0
„ Flushing apparatus repaired and new cisterns	40
„ New wash-down pedestals provided	32
„ General repairs (doors, &c.)	3

TYPE OF SANITARY CONVENIENCES.

There can be no doubt that any form of sanitary convenience other than the fresh-water closet is extremely objectionable in a large town, and the question of the general adoption of the water-carriage system throughout the Borough has been under the consideration of the Health Committee. The war has, however, prevented any further action in the matter.

52 pail closets and 6 slop-water closets have been converted to fresh-water closets during the year.

The number of the various types of sanitary conveniences in the Borough at the end of 1915 was, approximately, as follows :—

No. of Privy Middens (fixed receptacles)	128
„ „ Pail and Tub Closets	9695
„ „ Slop-water Closets	2737
„ „ Fresh-water Closets	22664

SEWAGE DISPOSAL.

The following is a brief account of the method of dealing with Blackburn Sewage, for which I am indebted to Dr. R. H. Pickard :—

The larger portion of the sewage of the Borough is collected by gravitation at Witton, where it is screened and passed through catch-pits to remove the gravel and rags which have obtained access to the sewers. It then travels to Samlesbury, a distance of $4\frac{1}{2}$ miles, in duplicate cast-iron pipe cyphons and brick tunnels. A portion of the sewage from the low-lying districts is now lifted into the conduits by new electrically-driven centrifugal pumps, situated at Fenisccliffe Bridge. Another main conduit takes the sewage from Beardwood district to Samlesbury.

On arriving at Samlesbury, the sewage passes through a detritus tank into the septic tanks. These are two in number, and hold together six million gallons, being a dry weather flow of about 30 hours. After septicisation, the sewage is treated with lime and sedimented in six tanks which have a total capacity of about one million gallons. The effluent from these tanks is then treated either on percolating sprinkler beds, or on double contact beds. The sprinkler beds, 19 in number, and each 80 feet in diameter, are fitted with revolving distributors. They are constructed of rubble stone and filled to a depth of nine feet with broken stone and destructor clinker. The small amount of suspended matter in the effluent from the sprinkler beds is removed in five separator tanks. The sprinklers will deal with up to six million gallons of sewage per day, according to the strength of the sewage. There are 12 pairs of double contact beds, which are filled with graded stone, destructor clinker, and iron slag. A little over one million gallons of sewage per day is treated on these beds, the effluent from which passes directly into the river.

There is also ample provision for the treatment of storm-water. This passes into ten tanks which were constructed for chemical precipitation and which together hold $1\frac{3}{4}$ million gallons. After sedimentation in these, the storm-water (in excess of six million gallons per day) is either distributed over about 400 acres of farm land contoured and partially drained for broad irrigation, or treated on the contact beds, which are then used as streaming beds.

SCAVENGING.

In my previous reports stress has been laid on the importance of a frequent and regular removal from the neighbourhood of dwellings of all forms of refuse.

The chief sources of danger are the large insanitary ashpit and the unsatisfactory ashtub. On account of the large size of the ashpit the tendency is to remove its contents at somewhat infrequent intervals, and its structure is such that the walls become impregnated with organic matter and are difficult to cleanse. The removal of the contents generally involves its being tipped on the back road or elsewhere previous to being placed in the scavenging cart.

The large ashtub is almost as objectionable, as the woodwork becomes saturated with filth and, on account of the weight of these large tubs, it is necessary, as in the case of the ashpit, to deposit the contents on the road or pathway before being placed in the scavenging cart.

The following statement represents the work carried out in this branch of sanitation during 1915, under the direction of Superintendent Marginson :—

Excreta Tubs emptied	532,636
Excreta Tubs cleansed	532,526
Ashes Tubs emptied	434,943
Dry Ashpits emptied	165,313
Wet Ashpits emptied	224

1,586 Loads of Dry Ashes Refuse, and 33 Loads of Midden Refuse, were tipped during the year.

The Refuse during 1915 was destroyed at the following Destructors :—

AUDLEY DESTRUCTOR—

	Tons.	Cwts.	Qrs.
Dry Ashes Refuse	6448	10	3
Midden Refuse	48	6	0
Fish and Market Refuse, Diseased Carcases, &c.	1219	16	1
	—	—	—
Total	7716	13	0

GREENBANK DESTRUCTOR—

	Tons.	Cwts.	Qrs.
Dry Ashes Refuse	11303	11	0
Midden Refuse	5	18	2
Fish and Market Refuse	49	0	3
	—	—	—
Total	11358	10	1

WENSLEY FOLD DESTRUCTOR—

	Tons.	Cwts.	Qrs.
Dry Ashes Refuse	8333	8	2
Fish and Market Refuse	131	13	2
	—	—	—
Total	8465	2	0

STORE YARD DESTRUCTOR—

	Tons.	Cwts.	Qrs.
Dry Ashes Refuse—Total	2104	0	1

HOUSING AND TOWN PLANNING ACT, 1909.

The following Tables show the work which has been carried out in connection with the Housing and Town Planning Acts by the Chief and District Inspectors.

The necessary notices were sent for the remedying of defects which could be dealt with under the Public Health Acts, and a considerable amount of remedial work was thus carried out during the year.

The following houses were ordered by Committee to be altered to the satisfaction of the Medical Officer of Health, or closed :—

90, 90a, 92, 94, 96, Larkhill;	} (still under consideration).
4, 6, Primrose Bank.	

Houses ordered to be demolished :—

119, 121, 123, 125, Chapel Street (demolished)

TABLE LVII.

Inspection of Dwelling-houses.

District.....	1	2	3	4	Total.
Number of Houses inspected during the year of which records are kept	79	70	129	141	419
Number of Houses found satisfactory	40	24	79	51	194
Number of Houses not kept in a reasonable condition, concerning which notices have been served ...	21	39	50	89	199
Number of Houses reported for visiting by the Health Sub-Committee	18	7	0	1	26
Number of Houses in which the ordered work has not been complied with, to be followed up under Sect. 91 P.H.A. 1875 .....	...	5	6	...	11
Number of houses in which the ordered work is completed	14	23	30	48	115
Number of Houses in which the ordered work is in course of progress, or, in hand	7	11	20	41	79
Number of Houses closed as unfit for human habitation .....	...	...	...	...	...
Number of Houses visited by the Health Sub-Committee	14	4	...	...	18
Number of Houses ordered to be altered to the satisfaction of M.O.H. or closed .....	...	4	...	...	4
Number of houses ordered to be demolished.....	...	...	...	4	4
Number of inspected Houses found to be overcrowded	0	3	0	0	3

INHABITED VANS.

The number of these dwellings visiting the Borough has been considerably less than in previous years. During Easter Fair the vans took up their positions, as usual, on the Market Ground, in the Borough Arms and Prince Albert yards, and on the open space in Penny Street. At other times a few have occupied ground behind Canterbury Street and Darwen Street. Constant supervision has been kept over them, and the general cleanliness of the vans and their surroundings has been well maintained.

Suitable arrangements for water supply and removal of refuse have been made.

HOUSES LET IN LODGINGS.

Twelve houses, containing 64 rooms, and accommodating 98 adults and 21 children, have been added to the register.

There are 71 of these tenements on the register, containing 324 rooms and providing living and sleeping accommodation for 683 adults and 119 children.

Regular inspections have been made of these houses by the District Inspectors, and frequent visits paid to them by the Chief Inspector.

The Bye-Laws have been fairly well complied with and the general cleanliness well maintained. 3,178 visits have been paid during the year.

COMMON LODGING-HOUSES.

Two houses have been given up during the year, and one temporarily closed owing to the large number of men joining the Army. There are 25 houses on the register, accommodating 1,069 adults and 15 children.

These houses have been visited frequently and regularly, 941 visits having been paid to them during the year. They have been found clean and in good order. Half the accommodation has not been required during the year.

The following is a list of the Common Lodging-Houses in the Borough at the present time.

<i>Situation of Premises.</i>	<i>No. of Rooms.</i>	<i>Accommodation.</i>
19 Larkhill Street.....	41	314 adults
66 Moor Street	20	92 "
3 Syke Street	8	66 "
8 Mount Pleasant	8	65 "
86 to 90 Chapel Street	7	40 "
7 and 9 Daisy Street	2	37 "
104 Mary Ann Street	5	37 "
56 Chapel Street	6	36 "
74 Chapel Street	5	36 "
39 Tontine Street	4	27 "
13 Birley Street	5	25 "
59 Water Street	5	25 " and 2 children
33 Joiners Row.....	6	33 "
145 Birley Street	5	21 "
26 and 28 Penny Street	10	33 " " 9 children
54 Syke Street	6	28 " " 1 child
83 Moor Street	5	21 "
30 and 32 Leyland Street.....	4	20 "
13 Grimshaw Park	3	18 "
26 Bradshaw Street.....	3	18 " " 2 children
33 Larkhill Street	3	16 "
8 Cowell Street	2	16 " " 1 child
47 Nab Lane.....	2	8 "
49 " "	2	12 "
15 Bent Street	3	25 "

CANAL BOATS ACTS, 1884 & 1887.

In compliance with these Acts and with the regulations of the Local Government Board, the Canal has been regularly visited, and 138 boats have been inspected during the year.

Six infringements of the Acts were detected, namely :—

Two masters without certificates.

Two boats in a leaky condition.

One boat unnumbered.

One boat in a dirty condition.

Four notices have been served notifying the owners of the infringements, and the necessary work has been carried out. Two boats, one not carrying a certificate and the other with a dirty cabin, were dealt with, on verbal notice to the owners in the former case and caution to the master in the latter.

No case of infectious disease has been met with, and there has been no detention of boats for cleansing or disinfection.

Two new boats have been registered. One boat has been re-registered through change of owner.

There are 65 boats which are in use or available on the register. 19 boats on the register have not been seen here for some time and cannot be traced.

In the 138 boats there were met with 242 males, 41 females, and 22 children. Ten of the children were under school age. Those of school age were either on holiday or absent through school being closed.

OFFENSIVE TRADES

There are 14 establishments in the Borough in which offensive trades are carried on.

The following is a list of the offensive trades :—

Tripe-boiling	6
Fat-melting	4
Gut-scraping	2
Horse slaughtering, &c.	2

14

One tripe-boiling and one fat-melting establishment has ceased to exist through disuse.

11 notices were issued to the aforementioned establishments.

The following trades also give rise to considerable offence :—

(1) RAG AND BONE STORES. There are 10 premises in the Borough on which rags, bones, and other household refuse such as old iron, jars, bottles, rabbit skins, &c., are sorted and stored. The greater part of the rags are in a filthy condition and, when stored in any quantity, give off an unpleasant odour which tends to cause a nuisance. The rabbit skins which are dried and stored on the premises are especially a source of considerable nuisance. As a rule, moreover, the premises are in a bad state of repair and the yards unpaved.

(2) BONE STORES.. There are 3 premises on which bones and a certain amount of fat, collected from butchers and others, are stored until a sufficient quantity has accumulated to form a profitable load for disposal. The bones and fat are frequently in a putrid condition and give rise to much nuisance, especially in hot weather. They also form a good breeding-ground for flies, which abound in the neighbourhood of these stores.

SMOKE OBSERVATIONS.

Observations of one hour's duration are made of the various chimneys in the Borough.

The following limits have been fixed by the Town Council as to the permissible emission of black smoke :—

Chimney in connection with 1 boiler—4 minutes' black smoke in the hour.

Chimney in connection with 2 boilers—5 minutes' black smoke in the hour.

Chimney in connection with 3 boilers—6 minutes' black smoke in the hour.

Chimney in connection with 4 or more boilers—7 minutes' black smoke in the hour.

The following Table summarises the work in this connection :—

Number of observations of one hour's duration ...	229
Number of occasions when limit was exceeded	14
Number of Notices served	12
Mechanical Stokers and other appliances provided..	2

NUISANCES.

283 formal complaints have been received from the public during the year, as compared with 843 the previous year, and 499 visits were paid for the purpose of investigating the same. Necessary steps were taken for the abatement of the nuisances.

Table LVIII.

Description of Notices Issued and Nuisances Remedied.

	District—	1	2	3	4	D.I.	Total
Preliminary Notices served		154	220	198	217	11	800
Legal „ „		27	31	40	44	1	143
Letters from M.O.H.		13	22	3	8	86	132
Examination of Drains—							
By Water.....		331	331
„ Smoke	402	402
„ Coloured water for leakages.....		181	181
„ Breaking down	124	124
Nuisances remedied from—							
Defective Drains	11	...	1	151	163
Choked „		10	40	49	84	2	185
Defective Water Closets		18	13	16	2	32	81
„ Pail „		9	7	1	3	...	20
„ Slop Water Closets		2	4	2	3	5	16
„ Trapped Gullies.....		3	10	1	1	176	191
„ Sink Waste Pipes		8	19	7	15	35	84
„ W.C. Cisterns and Flushing	
Fittings		9	18	3	16	40	86
„ Easing Troughs and Down	
Spouts.....		29	41	19	...	58	147
„ Soil Pipes	4	4
„ Gully Dishstones	5	...	...	176	181
Improper Drainage	2	...	...	...	2
Inspection Chambers provided.....		27	27
Sink pipes connected to drain	2	...	...	...	2
Yards unflagged		15	1	...	2	16	34
Cellars „
Yards badly paved or flagged	15	5	...	45	65
Houses overcrowded		5	2	1	...	...	8
Houses in filthy state		3	...	4	9	...	16
Yards, Closets, and Cellar Areas in a	
filthy state	27	3	20	...	50
Damp and defective house walls, roofs, etc.		51	56	9	70	...	186
Defective Window Frame, Sash Cords, &c.		7	10	...	...	...	17
Insufficient Ventilation of Rooms		10	4	19	8	...	41
Defective Manure Middensteads	1	...	1	...	2
Accumulations of Manure		155	394	592	554	...	1695
„ Offensive Matter		1	23	...	5	...	29
„ Stagnant Water		5	1	6	1	...	13
Dwelling-houses whitewashed.....		35	49	40	177	...	301
Poultry and Erections in yards removed ...		5	1	...	8	...	14
Low Chimneys raised.....		2	...	2
Ash Tubs provided or repaired		38	31	17	38	...	124
Ash Pits and Pail Receptacles repaired		16	2	18	20	...	56
Metal Ash Bins provided		25	28	23	7	...	83
Street Gullies, Ash Pits, &c., reported to	
Cleansing Department		10	78	3	55	...	146
Pail Closets converted to Fresh Water	
Closets	11	11
Slopwater Closets converted to Fresh	
Water Closets.....		5	5

Table LIX.

Summary of Visits paid by Sanitary Inspectors.

District—	1	2	3	4	D.I.	TOTAL
Common Lodging Houses	...	188	98	655	...	941
Houses let in Lodgings ...	568	280	373	1957	...	3178
Common Yards, Back Roads and Passages ...	2140	1911	2188	2209	...	8448
Infected Houses	228	232	229	275	...	964
Work in Progress	744	638	790	904	1160	4236
Inspection of Dwelling- houses	879	742	1007	544	...	3172
Horse-Manure Middens	302	386	602	552	...	1842
Miscellaneous.....	47	377	48	75	...	547
Investigation of Nuisances	148	120	116	115	...	499
Smoke Observations .....	...	...	...	...	...	229
Chip Potato Shops	323	21	271	192	...	807
Fishmongers and Greengrocers.....	36	14	217	131	...	398
Schools .....	...	33	...	50	...	83
Measles	495	352	428	170	...	1445
Chickenpox	175	158	43	55	...	431
Whooping Cough.....	69	28	45	52	...	194
Mumps	12	31	30	17	...	90
Sore Throats.....	24	35	43	28	...	130
Special Review of Sanitation of Borough.	878	759	2419	3175	...	7231

Section VIII.

METEOROLOGICAL OBSERVATIONS.

The Meteorological Station is situated on an open site in the Corporation Park.

Daily readings of each instrument are taken at 9 a.m. These instruments are :—

- 1.—Maximum Thermometer (Phillips's).
- 2.—Minimum Thermometer (Rutherford's).
- 3.—Hygrometer.
- 4 & 5.—Black and Bright Bulb Thermometers for Solar Radiation.
- 6.—Spirit Thermometer for Terrestrial Radiation.
- 7 & 8.—1ft. and 4ft. Earth Thermometers.
- 9.—Rain Gauge.
- 10.—Anemometer.
- 11.—Sunshine Recorder.
- 12.—Barometer (Fortin), kept at the Health Office.

A full description of the above instruments appeared in the Annual Report for 1903.

The total rainfall during 1915 was 43.074 inches, compared with 45.932 inches during 1914. ,

During 1915 rain fell on 207 days, compared with 237 days during 1914.

The wettest months of 1915 were December, August, January, February, and July, when there were 7.195, 6.805, 6.051, 5.462, and 4.500 inches of rainfall respectively.

The highest reading of the 4ft. Thermometer during 1915 occurred on August 25th, 26th, 27th, 28th, 29th, 30th, and 31st, namely 56.0 degrees Fahrenheit. The highest reading during 1914 was 56.8 degrees Fahrenheit, on August 28th and September 3rd, 4th, 5th, 6th, and 9th.

During 1915 there were 77 days without any bright sunshine, compared with 84 days during 1914.

The total amount of bright sunshine during 1915 was 1,24 hours 18 minutes, compared with 1,320 hours 4 minutes during 1914.

SUMMARY OF THE METEOROLOGICAL REPORT FOR 1915.

Mean monthly reading of the Barometer—29.917"

Highest daily reading of the Barometer—30.750"
on November 20th.

Lowest daily reading of the Barometer—28.696"
on January 1st.

Highest reading of the Maximum Thermometer—72°5
on September 8th.

Lowest reading of the Minimum Thermometer—21°0
on November 17th.

Total rainfall during the year—43.074 inches.

Number of days during the year on which rain fell—207.

Ten days of which the fall was less than .005 of an inch.

The greatest number of days on which rain fell in one month—
24 in December.

The highest reading of the 4ft. Thermometer during the year— $56^{\circ} 0$ on August 25th, 26th, 27th, 28th, 29th, 30th, and 31st.

The greatest amount of bright sunshine in one month—
236 hours, 28 minutes, in May.

The least amount of bright sunshine in one month—
24 hours, 15 minutes, in December.

Number of days during the year without any bright sunshine—77.

SUMMARY OF WIND RECORDS

For the Year 1915.

Number of days during the year on which the prevailing wind was—

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
13	16	49	32	73	51	118	13	38

The total number of miles registered by Anemometer during the year was—52,417.

The greatest number of miles registered during one day was—520 on December 31st.

The least number of miles registered during one day was—14 on October 17th and November 17th.

Name of District: BLACKBURN.

(See Notes at Back.)

CAUSES OF DEATH.		Net Deaths at the subjoined ages of "Residents," whether occurring within or without the District (a).										Total Deaths Residents or non-Residents in the District (b).
		All Ages. 2	Under 1 year 3	1 and under 2 years. 4	2 and under 5 years. 5	5 and under 15 years. 6	15 and under 25 years. 7	25 and under 45 years. 8	45 and under 65 years. 9	65 and upwards. 10		
All causes } Certified (c) ... Uncertified ...	I	2054	347	121	68	89	69	241	580	539	434	
		24	10	1	1	1	...	...	3	8	3
Enteric Fever ...	...	6	...	...	...	2	...	1	3	...	3
Small Pox ...	...	...	...	...	...	...	...	...	...	...	...
Measles ...	...	44	13	22	7	2	...	...	...	...	...
Scarlet Fever ...	...	6	...	...	4	2	...	...	...	...	5
Whooping Cough ..	...	39	21	13	4	1	...	...	...	...	2
Diphtheria and Group ...	...	8	...	2	4	2	...	...	...	...	3
Influenza ...	...	32	...	...	...	1	4	6	13	8	...
Erysipelas ...	...	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis)	...	109	1	...	...	8	21	51	25	3	37
Tuberculous Meningitis ...	...	14	1	2	2	8	...	1	...	...	...
Other Tuberculous Diseases ..	...	28	6	...	4	9	2	4	3	...	8
Cancer, malignant disease ...	...	157	...	...	...	...	2	20	85	50	38
Rheumatic Fever ...	...	16	...	...	...	...	1	3	9	3	2
Meningitis (See note d) ...	...	18	1	4	3	8	1	...	1	...	2
Organic Heart Disease ...	...	232	2	1	...	4	9	32	98	86	32
Bronchitis ...	...	263	57	16	8	1	4	8	71	98	38
Pneumonia (all forms) ...	...	201	37	28	17	15	7	27	40	30	26
Other diseases of Respiratory organs ...	...	15	...	...	...	...	1	2	8	4	...
Diarrhoea and Enteritis. (See note e) ...	...	59	42	9	2	...	...	1	1	4	5
Appendicitis and Typhlitis ...	...	8	...	...	...	5	1	1	1	...	13
Cirrhosis of Liver ...	...	12	...	...	...	...	...	...	10	2	1
Alcoholism ...	...	2	...	...	...	...	...	...	2	...	...
Nephritis and Bright's Disease ...	...	72	1	1	1	2	2	6	35	24	14
Puerperal Fever ...	...	3	...	...	...	...	...	3	...	...	2
Other accidents, and diseases of Pregnancy and Parturition ...	...	5	...	...	...	...	2	3	...	...	2
Congenital Debility and Malformation, including Premature Birth ...	...	112	108	3	...	1	...	...	...	...	5
Violent Deaths, excluding Suicide	...	33	3	...	4	8	1	5	5	7	32	
Suicides ...	...	13	...	...	...	...	...	5	8	...	...
Other Defined Diseases ...	...	502	62	21	8	9	8	44	135	215	167
Diseases ill-defined or unknown...	...	53	2	...	1	2	...	7	28	13	...	
Totals ..	...	2062	357	122	69	90	66	230	581	547	437
Sub-ENTRIES included in above Figures :—												
Cerebro-spinal Meningitis ...	...	...	...	...	...	...	...	...	...	...	...
Polio-myelitis ...	...	...	...	..	...	..	...	...	...	...	...

NOTES TO TABLE III.

The classification and numbering of Causes of Death are those of the "Short List" on page XXV. of the Manual of the International List of Causes of Death, which should be consulted and followed in all cases of doubt.

Copies of this Manual were distributed to Medical Officers of Health in 1912 by the Registrar-General, and may be purchased either directly or through any bookseller from Wyman & Sons, Ltd., 29, Breams Buildings, Fetter Lane, E.C., price 1/-.

- (a) All "Transferable Deaths" of residents, *i.e.*, of persons resident in the District who have died outside it, are to be *included* with the other deaths in columns 2-10. Transferable deaths of non-residents, *i.e.*, of persons resident elsewhere in England and Wales who died in the District, are in like manner to be *excluded* from these columns. For the precise meaning of the term "transferable deaths" *see* footnote to Table I.

The total deaths in column 2 of Table III. should equal the figures for the year in column 12 of Table I.

- (b) All deaths occurring in institutions for the sick and infirm situated within the district, whether of residents or of non-residents, are to be entered in the last column of Table III.

- (c) All deaths certified by registered Medical Practitioners and all Inquest cases are to be classed as "Certified"; all other deaths are to be regarded as "Uncertified."

- (d) Exclusive of "Tuberculous Meningitis" (10), but inclusive of Cerebro-spinal Meningitis.

- (e) Title 19 should be used for deaths from Diarrhoea and Enteritis at all ages. (In the "Short List" deaths from Diarrhoea and Enteritis under 2 years are included under Title 19; those at 2 years and over being placed under Title 28.)

N.B.—Deaths of soldiers and sailors occurring in hospitals and institutions in the district are to be excluded from the total number of deaths registered in the district, and such deaths should in like manner be excluded from column 11 of Table III.

Table LX.—Meteorological Report for the Year 1915.

1915	Mean Pressure		Mean Relative Humidity.	Mean of Maximum and Minimum Temperature.	Mean Temperature at 9 a.m. Readings	Under-ground Temperature		Mean Black Bulb in Vacuo.	Mean Bright Bulb in Vacuo.	Absolute extremes of Temperature.			Mean daily minimum on the grass.	Mean depression of minimum on grass below minimum in the shade.	Total bright sunshine.	Most sunshine in one day.		Direction of the Wind.						Mean daily movement of wind.	Total rainfall.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Station Level.	Sea Level.				Highest.	Lowest			Date.	Date.	Am't.				Date	N.	N.E.	E.	S.E.	S.	S.W.	W.			N.W.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	inches	inches	%	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. 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APPENDIX A.—TABLE II.

Cases of Infectious Disease notified during the Year 1915.

NOTIFIABLE DISEASE.	Cases notified in whole District.							Total Cases notified in each Locality.										Total Cases removed to Hospital.				
	At all Ages	At Ages—Years.						St. Stephen's	Trinity	St. Michael's	St. John's	St. Silas'	St. Paul's	St. Peter's	St. Mary's	St. Matthew's	St. Thomas' Park		St. Luke's	St. Mark's	St. Andrew's	
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65															65 and upwards
Small-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	39	1	18	15	2	3	...	...	...	...	1	3	3	4	2	1	3	4	5	2	4	3
Erysipelas	69	...	2	1	7	22	32	5	...	3	4	5	3	2	2	2	5	15	5	2	6	9
Scarlet Fever.....	460	2	111	314	22	10	1	...	...	43	43	23	30	9	15	42	46	40	16	19	59	...
Typhus Fever ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever ..	44	...	2	12	5	19	6	...	...	2	3	1	6	2	1	4	5	2	3	3	3	...
Puerperal Fever ..	5	...	...	...	...	5	...	...	...	...	2	1	1	...	...	1	...	...	...	...	...	...
Cerebro-spinal Meningitis ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Polio-myelitis ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia Neonatorum	19	19	...	...	...	...	...	...	...	...	...	2	2	2	1	1	...	1	1	...	1	...
Pulmonary Tuberculosis	213	2	1	27	39	97	42	5	...	10	20	8	18	11	28	10	12	18	13	12	14	...
Other forms of Tuberculosis	88	5	10	35	19	14	3	2	...	10	6	3	8	7	3	10	5	9	9	4	8	...
TOTALS.....	937	29	144	404	94	170	84	12	...	74	80	45	72	35	51	82	87	46	48	97	529	...

TABLE LXI. -TOTAL AMOUNT OF BRIGHT SUNSHINE RECORDED ON EACH DAY DURING 1914.

MONTH.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total for each Month.
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
January	0 0	0 0	0 0	0 0	2 0	5 50	0 0	0 0	0 0	0 0	4 20	0 0	0 0	1 20	0 0	0 0	0 0	0 0	0 0	0 40	0 0	0 0	3 50	0 0	0 0	5 0	0 10	0 20	0 0	0 20	0 0	23 50
February	0 0	0 0	0 0	0 0	4 45	1 40	1 10	2 30	0 20	3 50	5 40	3 45	1 35	0 10	1 30	1 20	0 35	3 10	0 30	1 10	5 10	5 15	4 20	0 30	5 20	0 0	1 30	0 0	.....	.....	.....	55 9
March	4 25	2 40	0 0	0 0	0 0	1 40	2 0	0 0	0 10	6 10	6 30	5 45	0 0	6 5	0 45	3 40	3 0	3 30	3 45	2 15	4 0	4 30	0 30	1 0	0 30	4 15	7 0	3 25	0 0	4 50	0 0	82 20
April	4 20	5 25	5 25	0 35	0 15	2 55	6 30	1 45	0 0	5 0	6 0	8 35	2 15	8 20	11 10	6 45	11 45	11 50	11 50	11 0	9 45	7 0	9 50	0 0	5 0	9 40	12 30	10 0	4 15	3 40	.....	193 20
May	2 32	11 50	0 30	2 15	3 45	1 10	0 0	3 35	2 10	0 0	7 50	9 50	0 5	2 30	6 50	8 30	11 10	11 5	0 40	2 10	2 15	3 45	0 0	5 0	8 10	6 40	12 15	2 35	0 0	6 30	2 40	138 17
June.....	6 35	0 0	13 20	6 40	0 0	1 10	6 15	1 50	0 10	9 20	10 45	1 10	11 45	14 5	14 0	11 20	7 45	4 25	13 0	9 20	3 0	3 45	8 15	2 15	9 15	9 10	5 5	7 30	0 0	13 30	.....	204 40
July.....	7 45	3 20	0 40	13 35	0 5	1 20	8 10	2 5	8 30	12 15	11 30	0 20	5 50	0 15	7 35	0 15	0 0	1 55	1 50	9 0	11 5	6 10	0 0	4 55	0 35	2 50	6 35	4 0	1 20	3 40	1 30	138 55
August	0 50	2 45	10 40	5 38	10 10	0 30	6 25	0 0	0 20	11 5	9 15	12 5	11 40	12 5	8 15	12 0	11 35	4 45	4 0	2 0	5 25	3 10	4 10	1 45	6 35	5 30	11 35	1 30	0 0	0 30	1 30	171 43
September	8 30	8 30	9 45	8 15	5 30	10 20	5 5	3 35	0 20	3 40	1 20	1 15	4 27	3 15	6 30	0 40	3 18	6 0	7 50	7 48	8 0	6 35	7 5	7 15	8 55	0 0	7 25	0 15	9 10	7 10	.....	167 43
October	0 45	4 30	2 40	5 0	0 0	1 55	6 25	0 0	5 30	2 10	3 0	0 0	0 0	0 45	0 40	0 0	0 0	0 15	0 0	1 50	1 30	0 20	4 15	1 30	0 0	3 0	4 45	2 45	5 15	2 20	0 0	61 5
November	5 45	0 45	3 20	0 0	0 40	0 0	4 10	0 0	0 0	4 50	0 0	1 17	1 10	6 35	0 0	7 10	6 40	3 0	0 0	1 30	5 10	0 0	2 0	0 0	0 0	0 0	0 5	0 45	0 0	0 45	.....	57 7
December	1 50	0 0	1 55	0 0	0 30	0 0	1 0	0 45	0 0	0 0	0 0	0 15	0 0	0 0	0 0	4 45	0 0	3 5	0 0	3 5	0 0	2 20	0 55	0 45	0 0	1 30	0 0	0 15	1 20	0 0	1 40	25 55

TOTAL AMOUNT OF BRIGHT SUNSHINE RECORDED ON EACH DAY DURING 1915.

MONTH.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total for each Month.	
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	
January	0 0	3 45	0 0	0 0	0 0	0 45	0 0	1 5	5 10	0 0	0 25	0 20	0 0	0 0	0 0	0 35	6 20	3 50	0 0	0 0	2 50	2 20	0 55	0 0	0 20	2 30	0 20	0 0	3 0	0 0	0 0	34 30	
February.....	0 0	0 0	0 0	0 0	3 30	1 20	0 0	4 0	4 0	4 30	2 30	0 0	0 0	0 50	6 18	3 30	1 55	0 0	0 0	6 45	4 10	1 45	3 50	8 50	4 10	0 0	2 45	0 25	.....	.....	.....	65 3
March.....	5 35	1 40	0 0	0 0	0 12	0 0	4 30	3 0	4 30	0 0	2 10	4 0	0 0	0 0	3 40	0 30	1 20	1 15	8 40	1 40	8 30	6 0	0 0	2 50	4 45	2 0	7 45	6 0	7 45	4 50	4 5	97 12	
April	2 30	0 45	0 0	6 45	8 5	0 0	7 40	1 55	7 45	8 30	0 0	0 40	7 50	8 35	0 30	1 25	6 45	7 20	0 0	7 15	4 20	2 50	9 30	0 0	5 5	2 25	10 45	12 15	12 40	12 45	.....	144 40
May.....	0 0	10 8	12 0	0 0	2 0	9 40	10 35	7 45	6 50	10 40	1 55	0 0	1 5	13 15	11 25	6 5	2 45	9 30	7 5	7 10	6 0	7 5	13 45	13 50	13 45	8 15	13 45	8 50	1 20	11 0	9 0	236 28	
June.....	11 15	7 55	1 0	8 45	4 20	6 40	7 38	7 10	9 55	0 35	7 55	8 40	10 40	14 5	13 55	12 55	7 25	14 0	10 20	12 10	12 30	7 10	0 0	2 40	6 15	1 30	10 35	5 45	2 45	3 0	.....	229 28
July.....	1 10	0 0	1 45	0 0	10 35	4 40	0 0	5 5	9 0	1 0	2 15	6 20	4 15	6 45	6 0	0 20	3 45	9 35	0 5	2 0	3 30	4 0	7 30	8 30	12 35	6 33	6 20	10 30	10 45	8 45	3 40	157 13	
August	2 25	1 50	3 35	3 15	0 40	1 30	0 0	0 0	0 5	2 40	3 10	4 40	9 50	3 55	5 35	0 0	2 35	11 20	5 0	3 35	7 45	0 35	9 0	5 5	5 50	8 35	4 15	0 10	4 40	3 20	3 15	118 10	
September	6 50	4 55	4 10	9 40	0 50	5 5	6 40	8 55	8 35	9 45	8 0	9 35	2 15	0 35	2 55	6 5	4 55	0 50	0 15	9 0	5 50	1 20	0 30	2 25	3 30	3 20	3 35	8 30	8 10	6 40	.....	153 40
October	7 15	0 0	0 0	6 20	6 35	2 5	0 40	2 10	0 55	0 45	3 30	0 40	3 55	1 20	6 0	2 30	0 10	0 15	0 0	0 15	1 20	0 5	0 0	0 0	4 35	0 12	0 0	0 10	3 40	3 35	0 0	58 57	
November	2 40	7 0	6 20	6 55	4 5	2 12	1 0	0 0	2 15	2 0	4 55	0 0	5 30	5 20	0 0	6 25	3 45	3 45	2 40	3 10	0 25	0 0	1 15	0 0	2 35	6 20	1 0	0 0	0 0	3 10	.....	84 42
December	0 0	3 45	0 0	0 0	0 0	0 35	0 0	2 30	0 0	0 20	0 0	2 40	1 10	0 0	0 0	1 0	0 0	3 40	1 0	0 0	0 0	0 0	0 0	0 25	0 0	1 20	1 0	1 0	2 25	0 0	0 0	1 20	24 15

LOCAL GOVERNMENT BOARD.

APPENDIX A.—TABLE I.—Vital Statistics of Whole District during 1915 and Previous Years.

Name of District: BLACKBURN.

YEAR.	Population estimated to Middle of each Year	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.†		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un- corrected Number.	Nett.		Number. *	Rate.	of Non- residents registered in the District. †	of Resi- dents not registered in the District. †	Under 1 Year of Age.		At all Ages.	
			Number. †	Rate.					Number. *	Rate per 1,000 Nett Births. 11	Number. *	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1910	132760	2948		22.2	2075	15.6	159	33	401	136.0	1919	14.6
1911	133149	2857		21.4	2242	16.8	123	30	534	186.9	2149	16.1
1912	133539	2741	2737	20.4	1988	14.8	118	58	327	119.4	1928	14.4
1913	133931	2923	2915	21.7	2205	16.4	147	61	431	147.8	2119	15.8
1914	134323	2814	2805	20.8	2080	15.4	141	67	326	116.2	2006	14.9
1915	127443	2456	2452	19.2	a 2184	17.2	164	b 42	357	145.6	2062	16.1

NOTES.—This Table is arranged to show the gross births and deaths registered in the district during the calendar year, and the births and deaths properly belonging to it with the corresponding rates. The rates should be calculated per 1,000 of the estimated gross population as stated in Col. 2, without the use of the standardising factor for the district given in the Annual Report of the Registrar-General. In a district in which large Public Institutions for the sick or infirm seriously affect the statistics, the rates in Columns 5 and 13 may be calculated on a nett population, obtained by deducting from the estimated gross population the average number of inmates not belonging to the district in such institutions.

*In Column 6 are to be included the whole of the deaths registered during the calendar year as having actually occurred within the district, but excluding the deaths of Soldiers and Sailors that have occurred in hospitals and institutions in the district. Information as to the number and causes of such deaths should, however, be given in the text of the report.

In Column 12 is to be entered the number in Column 6, corrected by subtraction of the number in Column 8 and by addition of the number in column 9. Deaths in Column 10 are to be similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8, and by addition of the deaths under 1 included in the number given in Column 9.

† The Medical Officer of Health will be able from the returns made to him by the local Registrar of Deaths, as well as from the quarterly lists furnished by the Registrar General, to fill in Column 8 in accordance with the rule in the next paragraph below. The Registrar General, either directly or through the County Medical Officer of Health, will supply the Medical Officer of Health with the particulars of deaths to be entered in Column 9; and all such deaths must be included in this Column, unless an error is detected, and its correction has been accepted by the Registrar General. For Column 4 the Registrar General will furnish to the Medical Officer of Health, a statement of the number of births needing to be added to or subtracted from the total supplied by the local Registrar.

‡ “Transferable Deaths” are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided. The deaths of persons without fixed or usual residence, e.g., casuals, must not be included in Columns 8 or 9, except in certain instances under 3 (b) below. The Medical Officer of Health will state in Column 8 the number of transferable deaths of “non-residents” which are to be deducted, and will state in Column 9 the number of deaths of “residents” registered outside the district which are to be added in calculating the nett death-rate of his district.

The following special cases arise as to Transferable Deaths:—

(1) Persons dying in Institutions for sick or infirm, such as hospitals, lunatic asylums, workhouses, and nursing homes (but not almshouses) must be regarded as residents of the district in which they had a fixed or usual residence at the time of admission. If the person dying in an Institution had no fixed residence at the time of admission, the death is not transferable. If the patient has been directly transferred from one such Institution to another, the death is transferable to the district of residence at the time of admission to the first Institution.

(2) The deaths of infants born and dying within a year of birth in an Institution to which the mother was admitted for her confinement should be referred to the district of fixed or usual residence of the parent.

(3) Deaths from Violence are to be referred (a) to the district of residence, under the general rule; (b) if this district is unknown, or the deceased had no fixed abode, to the district where the accident occurred, if known; (c) failing this, to the district where death occurred, if known; and (d) failing this, to the district where the body was found.

Area of District in acres
(land and inland water)

Total population at all ages 133,052
Total families or separate occupiers 30,648

At Census of
1911

(a) Not including the deaths of 10 combatants.
(b) Not including the deaths of 6 combatants.

Causes of Death in the County Borough of Blackburn during the Year 1915.

AGIS.

[illegible]

CAUSE OF DEATH.

AGES

	0 to 1	1 to 2	2 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwds	All Ages.		Total
																M	F	
54 Anæmia, Chlorosis	1	2	2	2	1	1	..	..	8	3	11
55 (a) Diabetes Insipidus
(b) Purpura	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
(c) Hæmophilia	1	..	..	..	..	..	..	..	..	..	..	..	1	1
(d) Other Diseases
56 Alcoholism, Acute or Chronic
57 (a) Occupational Lead Poisoning	1	1	..	..	..	1	1	2
(b) Non-occupational Lead Poisoning
58 Other Chronic Occupational Poisonings
59 Other Chronic Poisonings
60 Encephalitis
61 (a) Cerebro-Spinal Fever
(b) Posterior Basal Meningitis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Meningitis, other forms	1	5	2	..	..	..	..	..	1	..	..	..	..	..	2	2
62 Locomotor Ataxy	1	4	2	..	..	..	..	..	..	1	1	1	..	..	..	7	9	16
63 (a) Diseases formerly classed to "Other Nervous Affectons"	1	..	..	..	1	3	4
(b) Other Diseases	1	1	..	..	2	1	3
64 (a) Apoplexy	2	..	..	1	1	..	..	2	4	6
(b) Serous Apoplexy and Oedema of Brain	1	..	..	3	3	1	..	..	..	2	4	6
(c) Cerebral Congestion	3	3	..	..	5	11	10
(d) Cerebral Atheroma
(e) Cerebral Hæmorrhage	9	..	..	..	..	..	..	..	..
65 Softening of the Brain	1	3	..	..	9	12	15	..	1	40	40	86
66 (a) Hemiplegia	1	1	..	..	1	1	1	1
(b) Paraplegia	1	2	2	..	..	..	2	3	5
(c) Other forms of Paralysis	1	..	..	..	..	..	1	1	2
67 General Paralysis of the Insane	2	..	1	..	..	..	..	..	..
68 Other forms of Mental Alienation	1	1	1	..	..	..	..	..	..	..	3	3
69 Epilepsy	1	..	3	1	1	1	..	..	..	..	..	3	3	5
70 (a) Epileptiform Convulsions	4	1	..	2	1	1	1	1	..	..	6	5	11
(b) Other Diseases
71 (a) Convulsions from Teething	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6
(b) Other Infantile Convulsions	20	5	3	..	..	..	..	..	..	..	..	..	..	..	..	14	14	28
72 Chorea	1	1
73 (a) Hysteria, Neuralgia, Sciatica	1	..	..	..	..	..	..	..	..
(b) Neuritis	1	..	..	1	..	..	1	1	2

CAUSE OF DEATH.	AGES.															All Ages		Total
	0 to 1	1 to 2	2 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 upwds	M	F	
94 (a) Pulmonary Apoplexy and Infarction
(b) Pulmonary Oedema and Congestion
(c) Hypostatic Pneumonia
(d) Collapse of Lung (3 months and over)
95 Gaugrene of Lung
96 Asthma
97 Pulmonary Emphysema
98 (a) Fibroid Disease of Lung
(b) Other Diseases of the Respiratory System
99 (a) Diseases of the Teeth and Gums
(b) Thrush, Aphthous Stomatitis
(c) Parotitis
(d) Other Diseases
100 (a) Tonsillitis
(b) Ludwig's Angina
(c) Other Diseases of the Pharynx
101 Diseases of Esophagus
102 Perforating Ulcer of Stomach
103 (a) Inflammation of Stomach
(b) Other Diseases of Stomach
104 and 105 (a) Infective Enteritis
(b) Diarrhoea, not returned as infective
(c) Enteritis, not returned as infective
(d) Gastro-Enteritis, not returned as infective
(e) Dyspepsia, under 2 years
(f) Colic
(g) Ulceration of Intestines
(h) Duodenal Ulcer
106 Ankylostomiasis
107 Other Intestinal Parasites
108 Appendicitis
109 (a) Hernia
(b) Intestinal Obstruction
Other Diseases of the Intestines
111 Acute Yellow Atrophy of Liver

[illegible]

[illegible]

CAUSE OF DEATH.	AGES.															All Ages		Total
	0 to 1	1 to 2	2 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwds	M	F	
183 Homicide by Cutting or Piercing Instruments .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
184 Homicide by other means .. .. .	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
185 Fractures (cause not specified) .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
186 Other Violence .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
187 Dropsy .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
188 (a) Syncope (aged 1 year and under 70) ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..
(b) Sudden Death (not otherwise defined)	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
189 (a) Heart Failure (aged 1 year & under 70)	2	..	1	..	2	..	..	1	6	10	9	8	9	4	..	35	17	52
(b) Atrophy Debility, Marasmus (aged 1 year and under 70) .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Teething	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	7
(d) Pyrexia .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(e) Other ill-defined deaths .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
f) Cause not specified .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	357	122	69	55	35	32	34	93	137	244	165	172	322	198	27	1016	1046	2062

APPENDIX A.—TABLE IV.

Deaths under One Year, arranged according to Days, Weeks and Months.

CAUSES OF DEATH.	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	1st week.	2nd Week	3rd week.	4th week.	Under 1 month.	1 month to 2.	2 months to 3.	3 months to 4.	4 months to 5.	5 months to 6.	6 months to 7.	7 months to 8.	8 months to 9.	9 months to 10.	10 months to 11.	11 months to 12.	TOTAL.
All causes { Certified	34	8	9	5	3	3	1	63	18	16	8	105	33	19	21	30	22	15	23	16	28	22	13	347
Uncertified	8	...	...	...	...	...	...	8	...	...	1	9	...	1	...	...	...	...	...	...	...	...	...	10
Smallpox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	5	1	3	...	13
Whooping-cough.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup.....	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3	4	2	2	3	...	2	1	1	21
Erysipelas .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Abdominal Tuberculosis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	1	1	5
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	2
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Convulsions	2	...	...	1	...	1	...	4	3	1	1	9	3	3	...	...	1	1	2	...	1	4	...	24
Laryngitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2
Bronchitis .....	...	...	...	...	...	...	...	...	1	3	...	4	6	6	4	6	3	1	9	4	6	5	3	57
Pneumonia (all forms).....	...	...	...	...	...	...	...	...	...	...	1	1	1	...	1	4	5	3	3	5	9	2	3	37
Diarrhœa .....	...	...	...	...	...	...	...	...	1	...	2	3	5	2	2	5	4	1	1	1	2	2	...	28
Enteritis.....	...	...	...	...	...	...	...	1	2	...	3	1	2	1	1	1	1	3	...	...	...	2	...	14
Gastritis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	2	...	...	...	...	...	...	...	5
Syphilis.....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Rickets.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3
Suffocation, overlying.....	...	...	1	...	...	...	...	1	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	3
Injury at birth .....	...	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Atelectasis	3	...	...	1	...	...	...	4	1	...	...	5	...	...	...	...	...	...	...	...	...	...	...	5
Congenital Malformations..	4	...	...	...	1	...	...	5	1	1	2	9	2	...	2	2	...	...	...	...	...	...	...	15
Premature birth.....	24	7	6	2	1	1	1	42	4	5	1	52	2	1	1	...	...	...	...	...	...	...	...	56
Atrophy, Debility and Marasmus.....	8	...	1	...	1	1	...	11	2	2	1	16	6	1	3	3	3	...	2	2	...	...	1	37
Other causes	1	...	1	1	...	...	...	3	4	2	1	10	3	1	1	2	2	1	1	2	2	1	...	26
TOTAL	42	8	9	5	3	3	1	71	18	16	9	114	33	20	21	30	22	15	23	16	28	22	13	357

Nett Births registered during the calendar year { legitimate..... 2360
illegitimate 92

Nett Deaths registered during the calendar year of { legitimate infants..... 328
illegitimate infants 29



APPENDIX B.—TABLE I.

SOUTH WESTERN.

Enumeration District Number.	Population.			Rate per 1000.				Deaths under 1 year per 1000 births.	Incidence per 1000 of Population.															
				Birth Rate.	Death Rate.	Diarrhœa under 2 years.	Scarlet Fever.		Enteric Fever.	Diphtheria.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Measles.	Whooping Cough.										
1	...	978	...	15.3	...	16.3	...	0.0	...	66.6	...	2.0	...	0.0	...	0.0	...	1.0	...	0.0	...	5.1	...	0.0
2	...	1276	...	16.4	...	14.8	...	0.0	...	95.2	...	1.5	...	0.0	...	0.0	...	0.7	...	1.5	...	7.8	...	0.0
3	...	1520	...	18.4	...	14.4	...	0.0	...	178.5	...	3.2	...	0.0	...	0.0	...	2.6	...	0.0	...	9.8	...	0.6
4	...	1407	...	21.3	...	16.3	...	0.0	...	100.0	...	4.2	...	0.0	...	0.0	...	2.8	...	1.4	...	14.2	...	4.9
5	...	1567	...	26.1	...	12.7	...	0.6	...	73.1	...	1.2	...	0.0	...	2.5	...	0.0	...	1.2	...	8.2	...	3.8
6	...	1235	...	22.6	...	12.1	...	0.0	...	178.5	...	1.6	...	4.0	...	0.0	...	2.4	...	0.0	...	2.4	...	0.0
7	...	924	...	20.5	...	21.6	...	1.0	...	157.8	...	6.4	...	0.0	...	0.0	...	2.1	...	0.0	...	6.4	...	6.4
8	...	1166	...	16.2	...	15.4	...	0.0	...	105.2	...	4.2	...	0.8	...	0.0	...	1.7	...	0.8	...	4.2	...	2.5
9	...	1377	...	15.9	...	9.4	...	0.7	...	136.3	...	0.0	...	0.0	...	0.0	...	2.9	...	0.7	...	1.4	...	0.0
10	...	1047	...	21.9	...	19.1	...	0.0	...	217.3	...	0.9	...	0.9	...	0.0	...	0.9	...	0.0	...	1.9	...	0.0
11	...	1199	...	14.1	...	29.1	...	0.0	...	294.1	...	1.6	...	0.0	...	0.0	...	6.6	...	0.8	...	5.8	...	0.8
12	...	837	...	20.3	...	4.7	...	0.0	...	176.4	...	2.3	...	0.0	...	1.1	...	1.1	...	1.1	...	4.7	...	0.0
13	...	1384	...	22.4	...	15.9	...	0.7	...	64.5	...	0.7	...	0.0	...	0.0	...	0.7	...	0.7	...	2.1	...	0.7
14	...	1165	...	17.1	...	24.0	...	0.0	...	350.0	...	2.5	...	0.8	...	0.8	...	1.7	...	0.8	...	9.4	...	1.7
15	...	1175	...	17.8	...	19.5	...	0.8	...	285.7	...	3.4	...	0.0	...	0.8	...	2.5	...	0.8	...	4.2	...	3.4
16	...	974	...	20.5	...	13.3	...	0.0	...	100.0	...	1.0	...	2.0	...	0.0	...	2.0	...	1.0	...	8.2	...	9.2
17	...	1196	...	15.8	...	19.2	...	0.0	...	263.1	...	3.3	...	0.0	...	0.0	...	2.5	...	0.8	...	5.0	...	5.0
18	...	1515	...	17.1	...	14.4	...	0.6	...	192.3	...	1.3	...	0.0	...	0.6	...	0.0	...	1.9	...	6.6	...	3.3
19	...	1404	...	19.9	...	13.5	...	0.7	...	178.5	...	0.0	...	0.7	...	0.7	...	0.7	...	0.0	...	9.9	...	0.0
20	...	1025	...	22.4	...	9.7	...	0.0	...	43.4	...	0.9	...	0.0	...	0.0	...	0.9	...	0.0	...	6.8	...	4.8
21	...	1133	...	24.7	...	18.5	...	0.8	...	107.1	...	4.4	...	0.0	...	0.0	...	2.6	...	1.7	...	9.7	...	3.5
22	...	1552	...	18.6	...	12.2	...	0.6	...	137.9	...	3.2	...	0.0	...	0.0	...	0.6	...	0.0	...	2.5	...	0.0
23	...	1602	...	15.6	...	14.3	...	0.0	...	40.0	...	1.8	...	1.2	...	0.6	...	1.2	...	0.0	...	2.4	...	5.6
24	...	1939	...	23.7	...	13.9	...	0.5	...	87.0	...	3.6	...	0.5	...	0.0	...	1.5	...	1.0	...	3.6	...	2.5
25	...	2069	...	14.5	...	8.2	...	0.0	...	100.0	...	1.4	...	0.4	...	0.0	...	0.9	...	0.4	...	1.9	...	0.9
26	...	1324	...	20.3	...	21.9	...	0.7	...	148.1	...	0.0	...	0.0	...	1.5	...	1.5	...	0.7	...	12.0	...	2.2
27	...	1971	...	19.2	...	15.7	...	0.0	...	184.2	...	4.0	...	0.0	...	0.5	...	2.5	...	0.5	...	15.7	...	7.6
28	...	1982	...	20.1	...	14.6	...	0.0	...	150.0	...	3.0	...	0.0	...	0.0	...	1.0	...	0.5	...	17.1	...	1.0
29	...	1920	...	20.3	...	12.5	...	0.5	...	256.4	...	4.6	...	0.0	...	0.5	...	1.5	...	0.5	...	19.7	...	4.1
30	...	1639	...	20.7	...	18.2	...	0.6	...	176.4	...	7.9	...	0.6	...	0.0	...	0.6	...	1.2	...	13.4	...	1.2
31	...	1972	...	11.6	...	9.6	...	0.0	...	130.4	...	4.0	...	0.0	...	0.5	...	0.0	...	0.5	...	10.6	...	4.5
32	...	1727	...	12.1	...	9.8	...	0.5	...	142.8	...	6.3	...	0.0	...	0.0	...	1.7	...	0.0	...	12.1	...	1.7
33	...	1748	...	18.8	...	16.0	...	0.5	...	121.2	...	2.8	...	0.5	...	0.0	...	0.0	...	0.5	...	18.3	...	0.5

APPENDIX B.—TABLE II.

SOUTH EASTERN.

Enumeration District Number.	Population.		Rate per 1000.			Deaths under 1 year per 1000 births.	Incidence per 1000 of Population.																	
			Birth Rate.	Death Rate.	Diarrhoea under 2 years.		Scarlet Fever.	Enteric Fever.	Diphtheria.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Measles.	Whooping Cough.											
1	...	980	...	9.1	...	21.4	...	1.0	...	222.2	...	5.1	...	0.0	...	1.0	...	1.0	...	1.0	...	5.1	...	0.0
2	...	1095	...	15.5	...	28.3	...	0.9	...	352.9	...	1.8	...	0.0	...	0.0	...	4.5	...	0.9	...	4.5	...	0.0
3	...	1744	...	19.4	...	25.2	...	1.1	...	176.4	...	1.1	...	0.0	...	0.5	...	1.7	...	0.5	...	6.3	...	0.5
4	...	1022	...	18.5	...	33.2	...	0.0	...	105.2	...	8.8	...	0.0	...	0.0	...	4.8	...	0.9	...	5.8	...	0.9
5	...	1323	...	16.6	...	12.8	...	0.0	...	136.3	...	1.5	...	0.7	...	0.0	...	3.7	...	0.7	...	7.5	...	2.2
6	...	1824	...	20.8	...	16.4	...	1.0	...	184.2	...	3.2	...	0.5	...	0.5	...	1.0	...	1.6	...	9.8	...	3.8
7	...	1913	...	26.1	...	18.2	...	1.0	...	140.0	...	3.1	...	0.0	...	0.0	...	0.5	...	0.0	...	14.6	...	3.6
8	...	1848	...	23.8	...	16.7	...	0.5	...	159.0	...	2.7	...	0.0	...	0.0	...	1.6	...	1.0	...	11.9	...	3.7
9	...	1401	...	12.1	...	17.1	...	0.0	...	0.0	...	6.4	...	0.0	...	2.1	...	1.4	...	0.0	...	10.7	...	4.9
10	...	1498	...	20.6	...	16.7	...	0.6	...	161.2	...	10.7	...	0.0	...	0.0	...	2.0	...	1.3	...	7.3	...	1.3
11	...	1517	...	14.5	...	15.1	...	1.3	...	227.2	...	1.9	...	1.9	...	0.0	...	2.6	...	1.3	...	1.9	...	1.9
12	...	1260	...	31.7	...	21.4	...	0.7	...	150.0	...	3.1	...	0.0	...	0.7	...	2.3	...	1.5	...	5.5	...	1.5
13	...	1072	...	24.2	...	19.5	...	0.0	...	192.3	...	3.7	...	0.0	...	0.0	...	2.8	...	1.0	...	1.0	...	4.6
14	...	1855	...	24.8	...	11.3	...	0.5	...	83.3	...	5.9	...	0.0	...	1.0	...	1.0	...	1.0	...	4.8	...	3.2
15	...	1207	...	22.3	...	19.0	...	0.8	...	111.1	...	8.2	...	0.8	...	0.0	...	0.8	...	1.6	...	0.8	...	1.6
16	...	1899	...	21.6	...	13.1	...	0.5	...	170.7	...	1.6	...	0.0	...	1.0	...	2.1	...	0.5	...	3.1	...	5.8
17	...	1678	...	16.0	...	9.5	...	0.0	...	74.0	...	3.5	...	0.5	...	0.5	...	2.9	...	1.1	...	1.8	...	4.1
18	...	557	...	25.1	...	21.5	...	0.0	...	0.0	...	0.0	...	1.7	...	0.0	...	1.7	...	1.7	...	16.1	...	0.0
19	...	1948	...	13.8	...	14.3	...	1.0	...	296.3	...	0.5	...	0.0	...	0.0	...	0.0	...	1.0	...	1.0	...	1.5
20	...	1929	...	22.2	...	21.2	...	1.0	...	255.8	...	4.6	...	0.0	...	0.0	...	0.5	...	0.0	...	15.5	...	7.2
21	...	1912	...	8.8	...	10.9	...	0.0	...	58.8	...	4.1	...	0.5	...	0.0	...	0.5	...	0.0	...	8.3	...	2.0
22	...	1875	...	13.8	...	14.4	...	0.0	...	153.8	...	2.1	...	0.5	...	0.0	...	0.5	...	0.0	...	8.5	...	5.8
23	...	946	...	14.8	...	12.6	...	0.0	...	71.4	...	3.1	...	0.0	...	1.0	...	2.1	...	0.0	...	8.4	...	14.7
24	...	1343	...	22.3	...	25.3	...	0.0	...	100.0	...	3.7	...	0.0	...	0.0	...	0.0	...	0.7	...	11.1	...	3.7
25	...	924	...	23.8	...	10.8	...	0.0	...	45.4	...	9.7	...	0.0	...	0.0	...	0.0	...	0.0	...	5.4	...	5.4
26	...	900	...	17.7	...	23.3	...	0.0	...	62.5	...	3.3	...	0.0	...	1.1	...	3.3	...	0.0	...	4.4	...	0.0
*27	...	1051	...	0.0	...	10.4	...	0.0	...	0.0	...	2.8	...	1.9	...	0.0	...	2.8	...	0.9	...	0.0	...	0.0
†28	...	163	...	0.0	...	0.0	...	0.0	...	0.0	...	30.6	...	0.0	...	0.0	...	0.0	...	0.0	...	6.1	...	0.0
‡29	...	83	...	0.0	...	0.0	...	0.0	...	0.0	...	24.0	...	0.0	...	0.0	...	0.0	...	0.0	...	0.0	...	0.0
§30	...	290	...	0.0	...	68.9	...	0.0	...	0.0	...	0.0	...	0.0	...	0.0	...	12.0	...	0.0	...	0.0	...	0.0
																		27.5	...	0.0	...	0.0	...	0.0

* Blackburn Union Workhouse.

† Blackburn and East Lancashire Royal Infirmary.

§ Model Lodging House, Larkhill Street.

‡ Blackburn Fever Hospital.



APPENDIX B.—TABLE III

NORTHERN.

Enumeration District Number.	Population.			Rate per 1000.			Deaths under 1 year per 1000 births.	Incidence per 1000 of Population.																
				Birth Rate.	Death Rate.	Diarrhoea under 2 years.		Scarlet Fever.	Enteric Fever.	Diphtheria.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Measles.	Whooping Cough.										
1	...	760	...	10.5	...	14.4	...	0.0	...	0.0	...	2.6	...	0.0	...	0.0	...	0.0	...	0.0	...	1.3	...	0.0
2	...	1772	...	16.9	...	12.9	...	0.0	...	66.6	...	1.6	...	0.0	...	1.1	...	0.5	...	1.1	...	6.7	...	2.8
3	...	1978	...	12.6	...	15.1	...	0.0	...	160.0	...	3.0	...	0.0	...	0.0	...	1.0	...	0.5	...	5.0	...	1.5
4	...	1329	...	6.0	...	14.3	...	0.0	...	125.0	...	2.2	...	0.0	...	0.0	...	1.5	...	0.0	...	0.0	...	0.7
5	...	1507	...	9.9	...	12.6	...	0.0	...	66.6	...	1.3	...	0.6	...	0.0	...	0.6	...	0.0	...	7.3	...	1.3
6	...	1163	...	20.6	...	7.7	...	0.0	...	41.6	...	1.7	...	0.0	...	0.8	...	0.8	...	0.8	...	3.4	...	2.5
7	...	996	...	14.0	...	5.0	...	0.0	...	0.0	...	4.0	...	0.0	...	0.0	...	0.0	...	1.0	...	2.0	...	3.0
8	...	575	...	20.8	...	15.6	...	0.0	...	166.6	...	0.0	...	0.0	...	1.7	...	0.0	...	0.0	...	3.4	...	3.4
9	...	1810	...	16.5	...	11.6	...	0.0	...	100.0	...	4.9	...	0.5	...	0.0	...	1.6	...	1.6	...	2.2	...	0.0
10	...	738	...	23.0	...	16.2	...	0.0	...	0.0	...	1.3	...	0.0	...	0.0	...	2.7	...	0.0	...	2.7	...	1.3
11	...	1572	...	14.6	...	10.8	...	0.0	...	86.9	...	5.0	...	0.0	...	0.0	...	0.6	...	0.6	...	3.8	...	0.0
12	...	1390	...	20.1	...	12.9	...	1.4	...	250.0	...	5.0	...	0.0	...	0.0	...	0.7	...	2.1	...	21.5	...	0.7
13	...	1724	...	15.0	...	14.5	...	0.5	...	115.3	...	7.5	...	0.5	...	0.0	...	0.0	...	0.5	...	11.0	...	0.5
14	...	1445	...	11.7	...	11.0	...	0.0	...	235.2	...	5.5	...	0.0	...	0.0	...	2.0	...	0.6	...	19.3	...	0.0
15	...	2031	...	14.7	...	10.8	...	0.0	...	100.0	...	3.4	...	0.2	...	0.0	...	4.4	...	0.0	...	3.9	...	1.4
16	...	1489	...	10.7	...	10.0	...	0.0	...	125.0	...	3.3	...	0.6	...	0.0	...	2.5	...	0.0	...	12.0	...	3.3
17	...	1449	...	26.9	...	17.2	...	0.0	...	256.4	...	6.8	...	0.0	...	0.6	...	2.7	...	0.6	...	8.9	...	5.5
18	...	1400	...	19.2	...	16.4	...	0.0	...	37.0	...	2.8	...	0.7	...	0.7	...	0.0	...	2.1	...	8.5	...	2.1
19	...	1467	...	29.3	...	10.9	...	0.6	...	93.0	...	8.1	...	0.0	...	0.0	...	1.3	...	2.0	...	10.9	...	0.6
20	...	1382	...	28.2	...	17.3	...	2.1	...	282.0	...	0.7	...	2.1	...	0.0	...	2.1	...	0.0	...	6.5	...	0.7
21	...	1723	...	20.8	...	22.0	...	1.7	...	333.3	...	15.2	...	0.5	...	0.0	...	1.7	...	1.7	...	7.5	...	0.5
22	...	839	...	21.4	...	22.6	...	2.3	...	333.3	...	0.0	...	0.0	...	0.0	...	3.5	...	0.0	...	2.3	...	2.3
23	...	1249	...	27.2	...	24.8	...	0.8	...	88.2	...	4.0	...	0.8	...	0.0	...	5.6	...	0.0	...	12.0	...	0.8
24	...	1321	...	16.6	...	14.3	...	0.0	...	45.4	...	8.3	...	0.0	...	0.0	...	1.5	...	0.0	...	3.7	...	3.0
25	...	1160	...	29.3	...	18.1	...	0.0	...	123.5	...	2.5	...	1.7	...	0.0	...	0.0	...	0.0	...	15.5	...	3.4
26	...	1857	...	15.6	...	14.5	...	0.0	...	103.4	...	3.2	...	0.0	...	0.0	...	0.5	...	0.5	...	10.7	...	0.5
27	...	1476	...	21.6	...	12.8	...	0.6	...	62.5	...	2.7	...	0.0	...	0.0	...	0.6	...	0.6	...	6.7	...	2.7
28	...	1974	...	19.7	...	11.1	...	0.0	...	128.2	...	5.0	...	0.5	...	0.0	...	1.0	...	0.0	...	21.7	...	0.0
29	...	1481	...	12.8	...	18.2	...	0.0	...	157.8	...	2.0	...	0.0	...	0.6	...	2.0	...	0.0	...	12.1	...	0.0
30	...	1611	...	19.8	...	18.6	...	0.6	...	218.7	...	1.8	...	0.0	...	0.0	...	0.0	...	0.0	...	16.8	...	2.4
31	...	1353	...	15.5	...	18.4	...	0.0	...	142.5	...	0.7	...	0.7	...	2.2	...	1.4	...	0.0	...	9.6	...	5.9
32	...	1550	...	18.0	...	9.0	...	0.0	...	107.1	...	2.5	...	0.0	...	0.0	...	1.2	...	0.0	...	9.6	...	6.4
33	...	1338	...	26.1	...	17.9	...	0.7	...	171.4	...	3.7	...	0.0	...	0.0	...	2.9	...	0.7	...	5.2	...	6.7
34	...	137	...	0.0	...	21.8	...	0.0	...	0.0	...	0.0	...	0.0	...	0.0	...	0.0	...	0.0	...	0.0	...	0.0

* The Convent, Whalley New Road.

(occupation of parent given if of school age or under).

[illegible]